The Shoppe Manual

User's Guide and Tutorial for

Ye Olde Font Shoppe

Version 1.0

by

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"The Font Shoppe is open 24 hours a day, 7 days a week, and twice as long on holidays." -- the Shoppe Keeper

The Reciting of the Recognitions

The following are trademarks of Digitial Equipment Corporation:

DEC
LA100
Professional (as in Pro/300)

The following graphics scribes were created by DEC for the Pro/300:

CGLFPU (CORE Graphics library or CGL)
GIDIS (General Image Display Instruction Set)

The following programs are products of DEC for the Pro/300:

EDT
PROSE
PRO/SIGHT

The following programs are products of the IFAS Computer Network for the Pro/300:

GCL (GIDIS file decoder/encoder)
GIDDAP (GIDIS Display Application)
LA100 File Printing Utility (prints using Font Shoppe fonts)
SIGHTkick
Ye Olde Font Shoppe

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Section I.

PROGRAM INSTALLATION AND OVERVIEW

P/OS Versions Supported

The Font Shoppe may be used with P/OS versions 2.0 and 3.0. The File and Disk Services offered through the Shoppe will operate as usual under P/OS 2.0; in P/OS 3.0, both service options will use Disk Services. The Shoppe automatically determines the P/OS version, so you do not have to worry about it.

Application Distribution Diskettes

The Font Shoppe application is on two diskettes. Diskette 1 (disk volume name FONTSHOPD1) contains the bulk of the Shoppe Programs, and diskette 2 (disk volume name FONTSHOPD2) houses the remainder.

Also on diskette 2, directory [USERFILES], are several fonts which are **NOT** copied to the hard disk by the installation process. You may copy these files yourself to the hard disk for use with the Font Shoppe. Plus, this directory contains the text (TXT) files PROSEGRID.TXT and EDTGRID.TXT; these files are discussed in Chapter 11.

In diskette 2's [USERFILES] directory is a file FONTLIST.DOC -- print this file out; it describes what fonts files are in the directory.

The Optional, Stand-alone SIGHTkick

Also on diskette 2 is a program called SIGHTkick. SIGHTkick is an **OPTIONAL** stand-alone program, **IDENTICAL** to that provided by the Font Shoppe's Main Counter choice "Run Pro/SIGHT." The optional stand-alone SIGHTkick is **NOT** installed when you install the Font Shoppe.

The optional stand-alone SIGHTkick is provided for the user who, after creating all of the desired fonts, wishes to remove the Font Shoppe from the hard disk, but still wants to be able to use the fonts in Pro/Sight.

When you install the Font Shoppe, it includes its own utility to handle the "Run Pro/SIGHT" option. If you wish to install the optional stand-alone SIGHTkick, place diskette 2 into a drive and perform the usual application installation procedures.

The documentation for SIGHTkick is in a separate user's guide called "SIGHTkick, A Pro/SIGHT Font Loader."

Installation Directions

(1) Install the Font Shoppe application. To do this, insert the diskette labeled FONTSHOPD1 into a diskette drive and perform the usual installation procedure via Disk Services or Environment Services.

(2) When prompted, remove FONTSHOPD1 and insert the second diskette, FONTSHOPD2.

If the computer has a problem with installing the application, it is most likely due to your hard disk not having enough contiguous space and/or room. The Font Shoppe requires approximately 800 blocks of disk space with up to 250 blocks contiguous.

(3) After the installation has successfully completed, remove the diskettes and store them in a safe place. Or, examine the [USERFILES] directory on FONTSHOPD2 for fonts; print out the file FONTLIST.DOC.

(4) Create a hard disk directory named [FONTS].

(5) Set the current default directory to [FONTS].

(6) Run Ye Olde Font Shoppe. Press DO to proceed to the Main Counter.

(7) Either pull out or copy the Quick Reference pages in Section VI of this manual. Use these during the tutorial.

(8) Begin reading Section II. Follow the tutorial. A glossary is provided in Appendix A. Error messages are listed in Appendix B. When you run Pro/SIGHT, let any pictures you save reside in directory [FONTS].

(9) Read and complete the Section III tutorial. Examine Section IV for Advanced Topics.

Remember to keep your fonts and stuff in the directory [FONTS] so you can see what files the Font Shoppe creates and uses.

The Shoppe Manual Overview

This manual is divided into six sections, as described below.

Section I

Contains the contents and this overview.

Section II

Contains the Drawing Board tutorial. Explains how to use the Font Shoppe to create a font set. Read this Section next.

Section III

This section contains a tutorial for some of the Main Counter options. This explains how to translate the sample font you created in Section II into something you can use from Pro/Sight.

Section IV

This is the Advanced Topics section. Here you will find explanations for those Main Counter options not covered in the previous sections. Also, Chapter 11 explains what you can do with the optional EDTGRID.TXT and PROSEGRID.TXT files stored in the Shoppe's distribution diskette 2 (FONTSHOPD2) [USERFILES] directory.

Section V

This section contains the appendices, which includes a glossary and list of error messages.

Section VI

This section contains copies of charts and forms you will find helpful when using the Font Shoppe.

Section II.

THE DRAWING BOARD TUTORIAL

Tutorial Overview

The tutorial included in this section of the Manual will guide you, the Shoppe customer, through the Font Shoppe's Drawing Board option. You should be familiar with the following concepts before beginning the tutoral:

arrow keys (the four cursor-moving keys)
Compose Character key sequence
create a directory
create a file
cursor
delete a file
disk drives (or diskette drives)
file name
file extension
file version number
function keys
graphics
hard disk
how to unlock a locked file
installing an application
new file
old file
read from a file
save information in a file
set the current/default directory
write to a file

If you are not acquainted with a particular term or concept, you should reread the documentation that came with your Pro 300. Also, you would benefit by installing and running the application provided with your hard disk system diskettes: "Professional System Overview." The following terms are explained within Section II:

write to a file
ASCII
characters
Control-C (Ctrl-C)
CORE Graphics/CGLFPU
descenders
fill patterns
FNT
font
font files

GIDIS protocol
Interrupt-Do
stamp, stamper

Errors

Most errors will involve your pressing an inappropriate key or choosing an option out of sequence. To remedy the situation, either press the proper key or choose the correct option.

If the program indicates that you need to examine the Manual for an error's explanation, then refer to Appendix B, Error Messages and Warnings.

Chapter 1.

THE FONT SHOPPE: AN INTRODUCTION

It is a warm day, but the breeze offsets the heat of the sun. You are ambling down the boulevard toward the center of a small multitasking town. You reach a street where the pavement is cobblestone and the sidewalks are of brick. You pass a cafe, a small bookstore, and then you spot the old gentleman, wearing an apron and a straw hat, sweeping the dust from the front of his shop.

"Good day!" he hails and you repeat the greeting, glancing at the sign hanging from a pole above and perpendicular to the door: Ye Olde Font Shoppe it reads.

Much business today? you ask, stopping under a small shady oak in front of the store, resting your legs, in a mind for a friendly chat.

"Some," answers the Shopkeep. "Busier during the week -- when the offices are open. Get a lot of users needing font touchings-up for reports and presentations. Always in a hurry, they are!

I'll bet, you answer. We put out some charts where I work; always need to make it flashy to catch the clients' attention. I think we've used as many boxes and circles as we could fit in, but the whole picture still ends up looking like anything we've ever done.

"Don't need a lot to mean a lot to the eye," says the shopkeeper. "If you have reached you're creative limit and need something fresh, why not try a new font?"

A new font? you ask. What's that, as I'm sure you might know, you say as you glance at the sign.

He smiles. "Yes, I might know. I might just know." He sets his broom aside. "Come have a seat and a lemonade," he says, and you follow him to a bench under a canopy.

What a Font Is

"A font describes how letters and numbers look. For instance, have you ever seen Old English script? You know, the letters all have fancy loops and swirls. When you read a document with Old English letters, you could swear you were looking at something straight out of the eighteenth century.

"Well, what you might say is that those letters are made using an Old English font. That's what 'font' means: How the letters look.

"Now, the computer uses fonts as well. Nothing fancy mind you -- just plain and simple ones so your eyes won't go crazy from staring at them all day. The one your computer uses is a Gothic type of font. It comes with the computer when you buy it and you don't have to do anything special to use it; the computer knows how to use it. You just press keys and Gothic characters magically appear!"

Characters? you ask. What are characters?

"Characters refer to all of the numbers, letters, and symbols in a font. And each font will have it's own set of characters. For example, the characters in a calculator's font may only consist of numbers and a plus and minus sign. If Computer X is using a font, it doesn't mean that Computer X will have all of the characters that Computer Y has just because they are both using the same font."

And I can create new fonts for the computer to use? How do I get the computer to use them?

"Well, for your computer (Pro 300), graphics programs can use and display new fonts, just like they can display boxes and circles. For our purposes here, let us say that you cannot change the built-in font, the Gothic font you see when you turn the computer on.

"For a graphics program to display your fonts, the graphics program must be receptive to using new fonts. For example, you cannot use new fonts with PROSE or EDT because they just aren't designed with new fonts in mind."

Oh, I get it. I can make new fonts, but they can only be used by graphics programs that are designed to use the new fonts. I can't make the Pro 300 change it's Gothic font, just like I can't create new fonts for the LA100 printer. The printer doesn't know how to use font files I may create.

"That's right."

But what about Pro/SIGHT? Can I design new font files for it?

"Yes you can, but certain magic potions must be concocted to make Pro/SIGHT use your fonts," he says with a grin. (This is explained in the tutorial section.)

When I make a new font, do I have to make it especially for one type of graphics program? If I design a font for Pro/SIGHT, would I have to redesign it to work with, say, GIDDAP?

"No, you would not have to make changes for a font used with SIGHT and GIDDAP. They both conform to GIDIS protocols, and the Font Shoppe only produces GIDIS-protocol font files."

GIDIS what? you ask.

GIDIS

"Within your Pro 300 there resides GIDIS, a graphics master scribe. When a box needs drawing or a circle needs filling, an instruction is sent to GIDIS to draw the item on the screen.

"Most graphics programs on the Pro 300 use GIDIS to draw for them. It's a lot easier (and nicer) to use a provided graphics scribe than to have to go through a great deal of trouble to make your own scribe. For example, would you rather use the provided keyboard or build your own?

"As I mentioned, SIGHT and other graphics programs use GIDIS to draw on the screen. The Font Shoppe also uses GIDIS: GIDIS drew the introductory picture, and it also draws the Drawing Board grids.

"If you've used SIGHT, you will have noticed that you can 'write' letters on the screen and that they can be saved in a picture file (a GIDIS file mind you -- extention GID -- the name pays homage to the master scribe). You can also stretch and 'zoom' the letters. The way the letters are written to the screen is as follows: Let's say you choose one of the floppy-looking font characters provided. SIGHT will pass to GIDIS the message 'the user just chose font such-and-such. When a character key is pressed, use that font to draw the character on the screen.' Now let's say you press the A key; SIGHT will pass the A to GIDIS who will in turn draw the A with the shape specified in the floppy-looking font. Mind you, that font doesn't just have one message in it saying 'draw all characters kind of floppy-looking'; that font contains the actual shapes for letters A to Z, a to z, 0 to 9, et cetera."

Oh, I get it: GIDIS uses the actual shapes found in the font file to draw the character. SIGHT passes the character to GIDIS; GIDIS looks up the shape in the file and draws it on the screen. But what if the shape for a character doesn't exist? What, for example, would happen if only the shapes for letters A through M were in the file and I pressed N or T or Z?

"Then GIDIS will draw a splat: That's sort of a checkerboard pattern. It's GIDIS's way of saying 'I couldn't find a shape for that character so I'm drawing a nonsense pattern.' Don't worry -- GIDIS won't ruin your font file if he can't find the right shape! He's very lenient.

"Notice that I keep mentioning a font 'file.' This is important, because if graphics programs can use font files, they can use the font files more than once; in other words, the font information is kept in convenient locations -- in files -- so that the information can be used over and over again and shared by different graphics programs.

"And just for future reference, CORE Graphics (or CGLFPU), a lesser graphics Pro 300 scribe, actually uses GIDIS to draw on the screen. CGLFPU-using programs are therefore also following the GIDIS protocol.

"Perhaps you wish to enter the Shoppe now?..."

A Word About Vandalism

The Shoppe Keeper goes to great lengths to prevent damage to your font files. One of the methods of file protection used by the Keeper is the disablement of Control-C (a.k.a. Ctrl-C, alias Interrupt-Do). Control-C is a wanton shoplifter that has no regard for private property. Imagine the Keeper's surprise if, when the Keeper is placing a pattern into a font file, Control-C should sneak in; why, the file will end up with only half of one thing and none of the other. It would be very hard for the Keeper to rectify that problem.

Therefore, when you wish to remove yourself from the Shoppe, please be sure and follow the established route (press EXIT/DO combinations to get out). The Shoppe Keeper feels that his establishment is worthy of pause, and he doesn't want users "sneaking" in or out. "Do you ever exit from a cafe by jumping out of a window or by dropping through the floor?" he asks. However, should you produce a Control-C, the Keeper will recognize your weakness and bag the little fellow before it can do any harm: The Keeper will freeze the screen activity so he can catch the mite; he will then wait for you to press a key to unfreeze the screen. This key you press may be any harmless one such as the space bar.

The only event the Keeper cannot quash is the shutting off of the computer. Should the machine be shut off during writes to a font file, the font file may be rendered useless. If a font file cannot be adequately accessed from the drawing board or PRO/SIGHT, it should be deleted. The only persons who who may be able to resurrect a damaged font file are the Shoppe's architects.

Chapter 2.

INSIDE THE SHOPPE: A TUTORIAL

You enter the Shoppe. It is cool and shady inside. A ceiling fan with large blades turns slowly overhead.

The front of the Shoppe, where the door is, has a large picture window that looks out at the town square across the street. The sun is sinking behind the shop, so the view of the square is bright, the shadows of the trees are hidden. You see, in reverse, the words Ye Olde Font Shoppe painted upon the picture window; the letters are in an Old English font. You smile at that.

You turn around and notice the stained pine boards that make up the floor. They lead away from you to the long counter at the other end of the room. The counter is painted white and runs from the north wall to the south.

You sit upon one of the many bar stools that line the counter. Your eyes sweep the shelves upon the wall behind the counter, and you notice objects that you've never seen before, like stuff a city dweller might imagine he'd find in a farmer's mercantile establishment: Stuff he knows belongs there, in the scene, even though he doesn't know what any of it is. You gaze at the menu painted on a sign that's hanging from the wall. It reads, "The Main Counter."

"You are at the Main Counter," says the Shopkeep. "From here you may create and modify fonts. You may also use Pro/SIGHT if it is already on your hard disk."

You notice the final option: Pay for services. Your eyebrows raise. The Shoppekeeper notices your concern. "It is not a monetary payment," he says through a grin. "Your payment is time and patience. Remember, the Pro 300 is a powerful and complex machine."

About the Tutorial

The Shoppe Keeper will now lead you through the tutorial. You are free to experiment along the way. Should you find that you have gotten lost or feel you have scrambled something, press EXIT (and DO when specified) until you have left the Shoppe. Then, either begin again or continue where you have left off, if possible. (Note: EXIT procedures are boxed off and are quite visible in the narrative below.)

To refresh your memory as to what you have been doing, read the provided summary notes.

IT IS HIGHLY RECOMMENDED THAT YOU FIRST CREATE A NEW DIRECTORY ON THE HARD DISK FOR YOUR FONTS. SET THE DEFAULT TO THIS NEW DIRECTORY, THEN RUN THE FONT SHOPPE. THIS IS TO ALLOW YOU TO MORE EASILY SEE WHAT FILES ARE CREATED BY THE SHOPPE'S PROCESSES.

Above all: TAKE YOUR TIME.

Figure 2-1. At the Shoppe Keeper's Main Counter

The Main Counter

There are nine options available from the Main Counter. One is ADDITIONAL OPTIONS, and it is accessed by pressing the function key with that name. Do so. The Additional Options counter contains the three services available from the Pro 300's Main Menu: File Services, Print Services, and Disk Services. Exiting from the Additional Options counter will return you to the Main Counter. Press EXIT to do so.

"Let me use the drawing board"

This is the first Main Counter option. This option lets you create and modify font files. Choose this option.

mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm

How to leave the Drawing Board quickly:

Press EXIT, or a succession of EXITs, until the Exit Options menu appears; then press DO. You will wind up back at the Main Counter.

mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm

Welcome to the Drawing Board, the most elaborate of the Font Shoppe's counters. Let us now take a tour of the Drawing Board screen.

Figure 2-2. Drawing Board

The Character Grid

In the upper-left portion of the screen you will note a grid; below that is another grid. The top grid is labeled "Character Grid Keyboard Key:". It is upon this grid that you will create and modify font patterns. It is also where you always begin upon entering the Drawing Board. We will spend the rest of this chapter here.

Notice that a square cursor is flashing in the upper-left section of the grid.

INSERT HERE (fill one block on the grid)

Press the INSERT HERE key now. Congratulations! You have just created your first font pattern. You have also used your first Drawing Board function key.

HELP (defines a function key)

To find out what INSERT HERE really did, press HELP, then press INSERT HERE. In the box at the bottom of the screen, you should see a description for the INSERT HERE key. If you didn't, or the screen filled with text, press the space bar until the Drawing Board is redrawn and everything has calmed down. After reading the HELP message, press the space bar.

Summary:

(0) When entering the Drawing Board, you begin on the Character Grid.

(1) The flashing square cursor on the top grid is called the "stamp" or or "stamper." When you press INSERT HERE, the stamper will fill in the tiny little block on the grid that it outlines.

(2) When you press HELP and then INSERT HERE, you will receive a description of what INSERT HERE does.

The stamper is movable. To move the stamper to the right, press the right arrow key. To move the stamper down, press the down arrow key. The remaining arrow keys move the stamper in the corresponding directions. If you hold an arrow key down, the stamper will move faster in the indicated direction. The stamper will never travel off of the grid.

REMOVE (clear one block on the grid)

Now, let's try moving the stamper around the grid. Whenever you feel like it, press INSERT HERE. Suggestion: Make one of those "happy faces" (on the grid). You needn't worry about how accurate the head is. To remove a stamped block, move the stamper over the block and press REMOVE; the block will be cleared.

If you forget what REMOVE does, press HELP and then REMOVE. In the box at the bottom of the screen, you should see a description for the REMOVE key. If you don't, or if the screen fills with text, press the space bar until the Drawing Board is redrawn and everything has calmed down. After reading the HELP message, press the space bar.

Summary:

(3) Use the arrow keys to move the stamper around the grid.

(4) Use REMOVE to clear a block on the grid.

(5) When you press HELP and then REMOVE, you will receive a description of what REMOVE does.

"Normal" View Field

Notice that as you create and edit your pattern, the pattern on the grid is echoed to the Playing Field and the "Normal" View Field. (The Playing Field will be examined later.) The "Normal" View Field, in the bottom-middle of the screen, shows three sizes. You can expect Pro/SIGHT to show your pattern with the quality seen in the View Field sizes. Those sizes were chosen because larger sizes tend to make a pattern look ragged and smaller sizes tend to make a pattern look squished.

BREAK (turn OFF Update Fields echo)
General Information: Update Fields

The View Field patterns are unalterable by you. You can, however, increase response speed on the Character Grid (the grid you are working with) by telling the Drawing Board not to echo your pattern to the View Field. To do this, press BREAK now. Look in the box at the top right of the screen (the one labeled General Information). Notice that there is a line "Update Fields:". If you have pressed BREAK, the word following that line will be "OFF." OFF means that there is no echo. Now, try some sample INSERT HEREs and REMOVEs. Notice that you can insert and remove quicker without the pattern echo. Now, press BREAK again and the echoed patterns will be updated. Again, notice that the word after "Update Fields:" is ON, because the View and Playing fields are being updated.

Press HELP and then BREAK. You should know by now that pressing the space bar gets you out of HELP.

Summary:

(6) The "Character Grid Keyboard Key" grid is known as the Character Grid.

(7) When you insert or remove blocks on the Character Grid, the pattern is echoed to (a) the Playing Field and (b) the top half of the "Normal" View Field.

(8) The View Field shows what your pattern might look like as a character in use in SIGHT, for example.

(9) You can use BREAK to either turn on or off the pattern echo to the "Normal" View Field and Playing Field. The pattern echo or update status is given in the General Information box at the top right of the screen.

(10) There is HELP for BREAK. Pressing the space bar will get you out of HELP.

(11) A "block" refers to the little blocks that make up the grids. A "box" refers to a section on the screen: the box at the bottom of the screen, the Field boxes, the General Information box.

PF1 (reverse grid pattern)

Now press PF1. What PF1 does is make all of the blocks that were empty filled and all of the filled blocks empty. This is called reversing the grid. This is useful for (a) putting a lot of filled blocks on the grid and (b) seeing what your pattern looks like reversed. Try getting HELP for PF1.

Press PF1 again to reverse your pattern to the way it was before. Notice that PF1 does not alter the context of your pattern.

PF2 (flip grid pattern left/right)

Is your pattern symmetrical? That is, do the left and right halves look the same? If so, insert an extra block in the upper-left corner of the grid now. Then, press PF2. When you press PF2, the pattern on the grid will end up looking like a mirror of itself (the procedure is called flip left/right). Press PF2 to flip the pattern back again.

PF3 (flip grid pattern up/down)

Press PF3. Your pattern will be redrawn upside down. The procedure is referred to as flip up/down. Press PF3 again and your pattern will be flipped once more. Notice that like the PF1 and PF2 functions, PF3 will not alter the CONTEXT of your pattern -- your pattern can always be returned to its previous appearance by pressing the same function key.

Try getting HELP for these function keys.

Summary:

(12) PF1 will reverse the grid pattern. PF2 will flip the pattern left/ right. PF3 will flip the pattern up/down. These function keys will not change the context of your pattern.

(13) PF1, PF2, and PF3 provide quick means for altering the pattern on the Character Grid. If you like an altered pattern, you do not have to change it back.

Now, I'm going to lead up to a new concept, so bear with me.

PF4 (temporarily store grid pattern)

On many calculators there is a "memory storage" button. Let's say you have just added a list of numbers together and you want to temporarily store the sum -- you can press the "store in memory" button to do so. Subsequently, you can examine and use that stored number. You can even recall that number several hours later if you wish, as long as the calculator has not been turned off. Notice that the calculator can successfully store that number without the use of disk drives and files.

PF4 is the Drawing Board's answer to the "memory storage" button.

Let's say you like the way your pattern looks, but maybe it could be better, but you're not sure if what you do will improve your original creation. What you want to do is temporarily store the pattern.

Press PF4 once. Take a look at the bottom-right of the screen, where three asterisks (***) have now appeared below the PF4 in the box. This is to let you know that the pattern has been stored -- not in a file, not on the disk, but temporarily and separately from the working area.

Now you can try to "improve" your pattern. Try putting freckles on the happy face. Do a bad job of it.

SELECT+PF4 (draw stored pattern on grid)

You certainly did a bad job of that. But instead of going back and REMOVing all of the freckles, you can just have the nice "memory-stored" pattern brought back. To do so, follow these instructions CAREFULLY:

(a) Press the SELECT key once;
(b) press the PF4 key once.

If you mess up, try pressing CANCEL to cancel the SELECT prompt. If your happy face was scrambled, leave the Drawing Board, come back in, and start over.

By pressing SELECT, you may take advantage of modifications to the existing function keys (known as SELECT+ or SELECT plus). Let us try using SELECT with the function keys that we have been experimenting with. But first, make sure that the stored face has been recalled with the SELECT+PF4 procedure.

SELECT+CANCEL (cancel SELECT prompt)

Press SELECT. Notice that in the bottom box a list of function keys is given to show you what is available for SELECT+. Press CANCEL now. Remember: If you press SELECT, you can always cancel the SELECT prompt by pressing the CANCEL key. That's all CANCEL is good for -- canceling SELECT.

SELECT+arrow (scroll grid pattern in indicated direction)

Press SELECT again. Now press any arrow key once. You will notice that your pattern has been "scrolled" in the direction of the arrow key you pressed. Play with SELECT+arrow some more. Notice that whenever a row or column has been scrolled off of the grid, scrolling the pattern back the other way will NOT replace the lost row or column. Also notice that when you press SELECT, the text under the Character Grid reads: "Arrow keys will SCROLL stamp." When SELECT is not in use, the line will read "Arrow keys will MOVE stamp." Does this make sense?

Summary:

(14) When you press PF4, the pattern on the Character Grid is saved in a temporary storage. This is like what happens when you press the "store in memory" button on a calculator.

When you press PF4, *** will appear under the "PF4" in the "Function Keys Specific to the Character Grid" box to let you know that a pattern is currently in storage.

PF4 will retain the pattern until:

(a) You press PF4 again, in which case PF4 will replace the old stored pattern with the new stored pattern.

(b) You exit the Drawing Board.

Do not worry about trying to clear the PF4 storage area. The Drawing Board will clear it when you leave.

(15) SELECT+PF4 will replace the current grid pattern with the stored grid pattern. The stored grid pattern will not change.

(16) Press SELECT and a list of available SELECT+ function keys will appear in the bottom box. Press one of those.

(17) To cancel the SELECT+ procedure, press CANCEL.

(18) The arrow keys normally move the stamp about on the Character Grid. When you press SELECT+arrow (SELECT plus an arrow key), the whole Character Grid is scrolled.

(19) What the arrow keys will do is indicated in the line immediately below the Character Grid.

(20) Press HELP and then SELECT to see what each of the SELECT+ options will do.

SELECT+INSERT (fill in all blocks on grid)

Press the SELECT key and then press INSERT HERE. Remember how just pressing INSERT will fill in a block? Well, SELECT+INSERT will fill in ALL blocks. This is NOT the same as PF1: PF1 reverses blocks; SELECT+INSERT fills them all in.

SELECT+REMOVE (clear all blocks from grid)

Now perform SELECT+REMOVE (you should now know what is meant by the terminology: First press SELECT, then press REMOVE). Remember how just pressing REMOVE will clear a block? Well, SELECT+REMOVE will clear ALL blocks.

Your grid should now be empty. Leave it empty for now. Take a break.

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Intermission

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How to leave the Drawing Board quickly:

Press EXIT, or a succession of EXITs, until the Exit Options menu appears; then press DO. You will wind up back at the Main Counter.

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Let's continue with more SELECT+ options. Your grid should be blank. Use the arrow keys and INSERT to place some filled blocks in the upper-lefthand corner of the grid.

SELECT+PF2 (flip left/right with overlay)

You may recall that just pressing PF2 will flip the pattern left/right. SELECT+PF2 will do the same thing, except it will flip with "overlay." Perform SELECT+PF2 to see what I mean.

Notice that there are now filled blocks in both upper corners of the grid. SELECT+PF2 performs the following: (a) All filled blocks on the left half of the grid are symmetrically filled on the right half; (b) all filled blocks on the right half of the grid are symmetrically filled on the left half. Unfilled blocks may be filled in by this procedure, but filled blocks will never be unfilled.

Also notice that there is no function key to reverse this process. While PF2 alone is reversible, SELECT+PF2 is not. The following is a summary for all of the Character Grid-manipulating function keys.

	Key/Sequence	Changes Context of Grid Pattern?
*	ADDITIONAL OPTIONS	no
	arrow keys	no
	BREAK	no
	CANCEL	no
*	DO	no
	EXIT	yes
	HELP	no
	INSERT	yes - one block
*	NEXT SCREEN	no
	PF1	no - procedure is reversible
	PF2	no - procedure is reversible
	PF3	no - procedure is reversible
	PF4	no
*	PREV SCREEN	no
	REMOVE	yes - one block
	SELECT+arrow	yes - if filled blocks scroll off grid
	SELECT+INSERT	yes - all blocks are filled
	SELECT+PF2	yes - flip left/right is with overlay
*	SELECT+PF3	yes - flip up/down is with overlay
	SELECT+PF4	yes - stored grid replaces current grid
	SELECT+REMOVE	yes - all blocks are cleared
*	SET-UP	no

You should now be familiar with all of the above keys and sequences except for those marked with an asterisk (*), which we will be getting to shortly. If you are unsure about a function, go back and review it.

SELECT+PF3 (flip up/down with overlay)

You may recall that just pressing PF3 will flip the pattern up/down. SELECT+PF3 will do the same thing, except it will flip with "overlay." Now try SELECT+PF3 to see what will happen.

Notice that there are now filled blocks in both upper and lower corners of the grid. SELECT+PF3 performs the following: (a) All filled blocks on the top half of the grid are symmetrically filled on the bottom half; (b) all filled blocks on the bottom half of the grid are symmetrically filled on the top half. Unfilled blocks may be filled in by this procedure but filled blocks will never be unfilled.

As with SELECT+PF2, there is no function key to reverse this process. While PF3 alone is reversible, SELECT+PF3 is not.

You now have mastered the basics of font pattern creating. And notice that no files have been used so far. Now we will get into that area.

Before we do, however, let us take a walk around the screen again. At the top right corner of the screen is the box labeled General Information. You should know what "Update Fields:" is for and what key (BREAK) affects the status (ON/OFF). Above that line is the line "Character Grid File:". Remember that line.

Below the Information box is the Function Keys Available box. Everything from ADDTNL OPTIONS to PREV is available from all user-accessible boxes. The only user-accessible box you know of now is the Character Grid.

At the bottom of the Function Keys box are the "Function Keys Specific to the Character Grid." This function key listing will change when you move to other boxes.

The long box at the bottom of the screen is where the Shoppe Keeper posts messages and prompts you for answers.

Creating a New FNT File

Either bring back the clean happy face with a SELECT+PF4 or clear the grid with SELECT+REMOVE and draw a new one. Make the face a simple one. Press PF4 to store this pattern, as this clean pattern will be the template for many other faces. (PF4 will replace the "old" stored pattern with the "new" stored pattern.)

Now, add a feature to the face -- like a mustache or some hair. Let's say you are ready to save this face in an actual file.

The "FNT" in the heading above is not a typographical error. The files that the Drawing Board works with must always have an extension FNT, and only the Font Shoppe can make FNT files. The FNT file is NOT the font file that will work with PRO/SIGHT; the FNT file must be translated by the Shoppe into a SIGHT- or GIDIS-useable font file. We will get to font file translation process in Chapter 12.

The FNT file is not a text file, so don't try to edit it with PROSE or EDT or try to display or print it. If you are confused about what is going on with the FNT file, put it out of your mind for now and just follow the instructions.

SET-UP (keyboard key and FNT file options)

You want to store the face, so you will have to create a new FNT file to do so. Press the SET-UP key. The SET-UP presents three options:

Set/Change Keyboard Character
Use NEW Character Grid FNT file
Use EXISTING Character Grid FNT file

Since you need a new FNT file, move the blinking arrow down to the second option and press DO or Return. At the bottom of the screen you are prompted to enter a new file name. You do not enter an extension, as the Font Shoppe automatically uses FNT. Enter the file name FONTSHOP and then press CANCEL. This is to show you that whenever you are asked to enter numbers or names, you may press the CANCEL key to clear the entire entry. You also could have used the <X] key to delete one letter at a time.

Now enter any file name you wish to use, maybe something descriptive like HAPPYFACE or FACES, and press Return. The file will be created.

Notes:

(a) A FNT file has been created. The Font Shoppe will never delete the file. If you never store any patterns in the file, it will still remain in your hard disk directory.

(b) If the Shoppe Keeper responds with an error message concerning the file's creation, turn now to Appendix B for an explanation of the error message. If you are unfamiliar with making room for files on the hard disk, you had better find someone who can. You must exit the Drawing Board to handle disk problems.

Once the file is properly created, the file's name will appear in the General Information box at the top right of the screen after "Character Grid File:". The file is now assigned to the Character Grid.

Once the file is created, you must choose what character you want the face saved under. Since the face is an abstract character, it doesn't really matter what you save it under. But for this tutorial, save the face under the capital letter A. To do so, choose the first option on the SET-UP menu. When you are prompted for the character, press A and then Return.

Notice above the Character Grid the line now reads "Character Grid Keyboard Key: A". The pattern is ready to be saved under A.

You should still be in the SET-UP menu. Press EXIT to leave the menu and return to the grid. You are now prepared to have the face saved.

Summary:

(20) You have learned how to use the SELECT+INSERT, SELECT+REMOVE, SELECT+PF2, and SELECT+PF3 function key sequences.

(21) You know which function keys can change the context of the pattern and which can be reversed.

(22) You may create a file through the SET-UP menu. The file, once created, will never be deleted by the Font Shoppe.

(23) You chose a character to assign your pattern to so that it may be saved in the FNT file. The character is not saved in the file at the time the character is chosen.

(24) You know to find error and completion messages in the box at the bottom of the screen, the character you have chosen for the Character Grid pattern above that grid, and the Character Grid file name in the General Information box.

DO (save the pattern in the FNT file)

When you EXIT from the SET-UP Menu, the menu is removed from the screen. To save the pattern, press DO now. If any error messages appear, refer to Appendix B. Otherwise, the message at the bottom of the screen will indicate that the face was stored under letter A.

The first face is now saved under the letter A. Now it is time to make another face. Press SELECT+PF4 to have the template face redrawn on the grid. Add a different feature to the face, such as big ears or antennas. Let's prepare to save this face

under B. To change the grid's keyboard key, press SET-UP, choose the first option, press B, and then press Return. Press EXIT to leave the SET-UP Menu.

Now press DO to save the second face. Two faces are now in the FNT file. Before we go on, press DO again now. A warning message will appear in the bottom box letting you know that a pattern has already been saved under the letter B. Sometimes you may forget to change the letter before pressing DO, so this message will be helpful. Other times, you will WANT to change the pattern stored under a letter, maybe because you have improved it.

Press CANCEL to avoid replacing the pattern (although you could press RESUME since the face currently on the grid is identical to the one you just stored, so the stored pattern will remain the same).

ADDITIONAL OPTIONS (display or print the FNT file)

Since there are two faces in the FNT file, maybe you would like to see them to be certain they were saved? Sure you do. Press ADDITIONAL OPTIONS.

Note: The FNT print/display option is more fully explained in Chapter 14, but don't skip to that chapter now. Just follow my instructions carefully. We don't want to confuse you more than we have to, now do we?

The screen will clear and at least one FNT file name will appear. Move the -> if necessary to your "faces" file name and press DO.

The screen will clear again and you will be asked to enter a starting ASCII number. JUST PRESS RETURN.

You will be asked for the ending ASCII number. JUST PRESS RETURN.

Now, you get to choose whether you wish to have your faces printed or displayed on the screen. Choose the display-on-the-screen option. The faces will be displayed in two sizes (similar to the two larger sizes on the "Normal" View Field). Underneath each face you will see a number, the ASCII number (065 is ASCII for A, 066 is ASCII for B). What is ASCII? you may ask. The answer appears a little later on, in Chapter 4. For now, just follow the screen's instructions for returning to the Drawing Board.

That example hopefully proved that the faces actually were saved in the font file you specified, under the letters you specified.

Summary:

(25) When you press DO, the pattern will be saved under the letter you have specified. If a pattern was already saved under that letter, a warning message will appear in the bottom box. You may then press CANCEL to avoid replacing the pattern or RESUME to replace the saved pattern with the new one currently on the grid.

(26) When you press ADDITIONAL OPTIONS, you may display a FNT file's pattern on the screen or have the patterns printed out.

You should now be familiar with every function key listed in both function key boxes on the right of the screen, except for NEXT SCREEN and PREV SCREEN. You should now know how to make a pattern, manipulate a pattern, store a pattern in memory, and save a pattern to a new file. If you have forgotten how to do any of these things, go back and review them now. Make and save more faces if you wish. We will move on to the next chapter of the tutorial after one more item.

Use an Existing FNT File

On the SET-UP Menu are three options. We have used two: Choose a keyboard character and use a new FNT file. The last option, use an EXISTING FNT file, works almost like the second.

When you press DO to save a pattern, the Drawing Board will save it in whatever FNT file is listed in the General Information box. This file can be new and empty or it can already contain font patterns. When you choose the final SET-UP Menu option, you get to choose a FNT file from the list of those in the current directory. Or, you can choose another directory by pressing ADDITIONAL OPTIONS while in that list menu. Once you choose the existing FNT file, you can also save patterns in it by pressing DO from the Character Grid.

Therefore, if and when you leave the Drawing Board, and when you return to add more faces into the FNT file, you may select that file with the SET-UP Menu's existing-file option.

Chapter 3.

THE REFERENCE GRID

You should still be on the Character Grid. We will now move to the Reference Grid (it is below the Character Grid). To do so, press PREV SCREEN now.

You should notice three things:

(a) The pattern on the Character Grid is not altered when you travel to the Reference Grid.

(b) The Reference Grid's boarder is now flashing.

(c) While the "Function Keys Available" box remained the same, there were some changes made to the function key list below it, which now reads "Function Keys Specific to the Reference Grid." The Drawing Board knows where you are and adjusts the information accordingly.

If the Character Grid is concerned with placing font patterns into the FNT file, then the Reference Grid is concerned with extracting that information. The FNT file you choose for the Reference Grid may or may not be the same FNT file you specified for the Character Grid. Also, patterns may be transfered from the Reference Grid to the other grid; in this way, you may edit patterns that are stored in a FNT file.

Choosing an Existing FNT File

SET-UP (keyboard key and FNT file options)

The only way to bring a pattern onto the Reference Grid is by having it extracted from an existing FNT file. To do so, press the SET-UP function key now. This function key, as well as others, are similar to the Character Grid keys.

Use the appropriate SET-UP Menu option to select your "face" FNT file. Before exiting the SET-UP menu, choose the option to set the keyboard character. Enter the letter A as the keyboard character to recall. Then, EXIT the SET-UP menu.

If you had successfully stored the first face under the letter A, it will now be drawn onto the Reference Grid. If the face is not drawn, try some of the other letters you had stored faces under, being sure to enter a CAPITAL letter. (If no faces appear, and you are certain you have chosen the correct FNT file, contact the architects for further assistance.)

Figure 3-1. Drawing Board's Reference Grid Set-Up Menu

When a pattern is drawn on the Reference Grid, this pattern will be echoed in the bottom portion of the "Normal" View Field box, just like the Character Grid patterns were echoed in the top part of the Field box.

Summary:

(27) When you press PREV SCREEN from the Character Grid, you will be moved to the Reference Grid.

(28) Press SET-UP to set the Reference Grid FNT file and keyboard character. The pattern stored under the chosen character will then be drawn on the grid. The pattern will also appear in the bottom half of the "Normal" View Field box.

(29) Both grids can reference the same FNT file.

Note: You must select the FNT file BEFORE you choose the keyboard key. If you choose the keyboard key first, the Drawing Board will attempt to find the pattern for that key -- which it will not be able to do since no file was set. When you choose the keyboard key, the Drawing Board immediately attempts to extract the pattern information and display it on th Reference Grid.

Why would you bother with the Reference Grid if you can do all of your work from the Character Grid? Two reasons:

(a) You can recall a pattern and transfer it to the Character Grid to act as a template for further characters.

(b) You can recall a pattern and transfer it to the Character Grid to combine characters from different FNT files into one FNT file.

An example for (a) would be where you left the Drawing Board and later returned to create some more faces. Since your template would no longer be stored under PF4 (since you had left the Board), maybe you would have anticipated this problem and stored the template face under the letter T in the FNT file. Now, upon returning to the Board, you could recall the template face upon the Reference Grid, transfer it to the Character Grid, and store it in PF4 for further use. Or, if you had not stored the template face, you could at least recall any other face, transfer it to the Character Grid, clean it up to its template state, and use that face.

An example for (b) would be where you had several different FNT files for different types of faces, and you wanted to place a sample from each different file into a separate FNT file. You could do this by using the SET-UP Menu on the Reference Grid to recall the faces from the files one at a time and transfer them to the Character Grid (one at a time) where they would be stored in the separate FNT file you had established through its SET-UP menu.

SELECT+INSERT (overlay pattern onto Character Grid)

Let's transfer the pattern on the Reference Grid to the Character Grid. To do so, perform SELECT+INSERT now. If there already was a pattern on the Character Grid, notice that the pattern was not cleared before the Reference Grid pattern was transfered. This is called an overlay-transfer, and it is provided so that you may "add" different patterns together. If the Character Grid was empty, you will not have noticed this affect.

If the Character Grid did have a pattern on it before you performed a SELECT+INSERT, do the following: Press NEXT SCREEN to return to the Character Grid; perform SELECT+REMOVE; press PREV SCREEN to return to the Reference Grid; perform SELECT+INSERT. This is what you would do to clear the Character Grid for a "clean reception" of the Reference Grid pattern.

The following function keys work identically to those provided on the Character Grid, except that they affect the Reference Grid pattern. Except for SELECT+REMOVE, these function keys do NOT affect the pattern as it is stored in the FNT file. They are provided as a means of manipulating the pattern before it

is transfered to the Character Grid, if you decide to do so.

Key/Sequence	Performs	Changes Context?
ADDITIONAL OPTIONS	displays/prints FNT file	no
CANCEL	cancels SELECT prompt	no
EXIT	exit option	yes, if you EXIT board
NEXT	jump to Character Grid	no
PF1	reverses grid blocks	no -- reversible
PF2	flip left/right	no -- reversible
PF3	flip up/down	no -- reversible
PF4	store pattern in memory	no
PREV	jump to Playing Field	no
SELECT+INSERT	overlay-transfer pattern to Character Grid	no for Reference Grid, yes for Character Grid
SELECT+PF2	flip left/right overlay	yes
SELECT+PF3	flip up/down overlay	yes
SELECT+PF4	redisplay stored pattern	yes
SELECT+REMOVE	DELETE PATTERN FROM FILE	no
SET-UP	set FNT file/keyboard key	no

Notice that you cannot individually INSERT and REMOVE blocks as you did on the Character Grid.

Also notice that the PF4 provided for the Reference Grid IS INDEPENDENT OF THE PF4 STORAGE PROVIDED FOR THE CHARACTER GRID. Therefore, you have two PF4's -- one for each grid -- available for your use.

SELECT+REMOVE (delete pattern from FNT file)

The SELECT+REMOVE procedure will remove the pattern stored under the currently selected keyboard key on the Reference Grid from the current FNT file. When you perform a SELECT+REMOVE, you are asked to confirm the procedure by pressing RESUME (or CANCEL to cancel the delete). After you delete the pattern under the specified character, you may save another pattern under that character by using the appropriate procedures on the Character Grid.

It is your turn to play with the functions keys provided for the Reference Grid. Try bringing up a stored face, transfering it to the Character Grid, adding a border around the face, and storing it in the faces FNT file. Remember, if you want to store the new face under a character that already has a face in it, you do not have to delete the face (SELECT+REMOVE) from the Reference Grid -- you can just press DO twice on the Character Grid.

Summary:

(30) SELECT+INSERT will transfer the pattern on the Reference Grid to the Character Grid. The pattern is overlay-transfered, meaning that any pattern already on the Character Grid will not be cleared before the transfer takes place.

(31) Most of the keys provided for the Reference Grid are similar in function to those provided for the Character Grid.

(32) The PF4 storage area for the Reference Grid is a different storage area than the PF4 provided for the Character Grid.

(33) SELECT+REMOVE will delete the pattern for the current keyboard key from the FNT file.

If this chapter seemed to be less detailed than the previous chapter, it is because you should be somewhat familiar with the function keys as presented in the previous chapter. If you are unsure about a particular key's function, reread the previous chapter (and especially the Summaries).

There are a lot of things available for both grids, so it may take a while for you to get familiar with all of them. At the least, be sure you know what function keys you should NOT use (such as SELECT+REMOVE, unless you mean it): You may want to make a list of these "hands-off" keys for each grid until you are more sure of their functions.

And remember: You can press HELP and then a function key to view its definition.

In a further chapter, we will examine the Playing Field.

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Intermission

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Chapter 4.

SHOPPE KEEPER'S TALES

Chapter 4 takes a break from the Drawing Board action. If you wish, you may skip to Chapter 5, The Playing Field, and come back to this chapter when it is convenient for you to do so. Skipping this chapter will not affect your ability to comprehend Chapter 5.

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The Shoppe Keeper suggests that you take a break, and also his mouth is getting dry from all that talking. He leads you to a separate room with several overstuffed easy-chairs and ottomans. He offers you some iced tea.

You glance at the walls about you. Three of the walls contain shelves from floor to ceiling that carry books from end to end. One wall has a large poster with characters and numbers.

Is this your library? you ask. "Yes, it is," the Shopkeep responds. "I've accumulated a great number of tombs that illustrate many font shapes and sizes. I have samples of fill patterns from all over the world. Many customers have pored over the books in this room, trying to find the 'perfect' font for their GIDIS pictures."

Do many find that "perfect" font? you inquire.

"Yes, all the time!" he says with a laugh. "You should see them! They open a book and say, 'Yes! That's perfect! THAT's the one I want!' Then they peruse another volume and shout: 'YES! THIS IS IT!' And so on and so on they go, from one book to another, shouting with glee, 'I found it!' For to them, all fonts look new and wonderful and perfect compared to the poor old Gothic font you see on your computer screen.

"BUT," he continues, "when it comes time to key in the patterns, they sober up, because it takes time to create an entire alphabet, especially the odd ASCII characters. Plus, some patterns are difficult or impossible to transfer onto the 16-by-16 grid on the Drawing Board.'

Why are the Drawing Board grids 16-by-16? you ask.

Why the Grids are 16-by-16

"Graphics characters can be created with a size from 1 row by 1 column (1-by-1) up to 16 rows by 16 columns (16-by-16). These ranges are set by the GIDIS master scribe. The Font Shoppe has decided to allow 16-by-16 grids because SIGHT allows 16-by-16-sized characters. When the characters are written to the actual task font file (a subject we haven't gotten to yet), the row-and-column size must be specified. This size will be 16-by-16.

"16-by-16 allows you to create fairly detailed patterns for a font. However, some font patterns are simply too complex and would appear ragged on the provided grid.

"You will notice that the bottom three rows on the Drawing Board grids are a different color than the rest of the corresponding grid. These three rows are referred to as the descender area."

And, please, what is a ... ?

" ... descender?"

What is a Descender

"Notice the following letters: g, j, p, q, y. They have a tail that hangs down below the imaginary line that the above sentence sits upon. These tails are known as descenders. They 'descend' below the imaginary line.

"The descender areas on the Drawing Board grids mark the areas below the imaginary sentence line. When you create an alphabet font, you can position and center the letters correctly if you only let tails and florishes go into the descender area.

"When you were practicing on the Board by drawing faces, it did not matter where on the grid you drew them, because the faces are abstract patterns. And actually, it is NOT obligitory to draw the descenders in the descender area, but it will help you to develop a sense of consistency."

In other words, I can do what I want ...

" ... as long as YOU know what you are doing," says the Shoppe Keeper, nodding.

ASCII

Your attention returns to the large poster. (A copy of this poster appears in Section VI of this manual.) It is labeled ASCII Character Chart, and it has legends defined at the top, columns going across the face, and a most remarkable rendering

of a classic oriental dragon along the bottom. (Regrettably, the dragon could not be reproduced.) It is very bright and colorful. (Sorry.) It is printed upon a background of (-- THAT'S ENOUGH!)

"That chart indicates the keys available from the Drawing Board," says the Shoppe Keeper. "If there is a letter in the DBK column, that letter may have a pattern stored under it in the FNT file."

There appears to be about half as many letters in the DBK column as numbers in the ASC column, you say. And why does the first ASC number begin at zero?

"GIDIS allows up to 256 (numbered zero to 255) characters in a font file. Naturally, there are not 256 character keys on the keyboard (and you cannot use the function keys as font character keys.)

"ASCII stand for 'American Code for Information Interchange.' That's a mouthful for saying 'let's have some consistency in assigning numbers to characters,' because, as you may know, the computer works only with numbers. And when your computer communicates with another computer, you need to have the numbers for the characters match!

"When you press, say, the letter A, the keyboard sends not an 'A' to the computer but the ASCII number 65. GIDIS then finds the pattern for the letter A by going 65 letters deep into the font-pattern area. Therefore, the ASCII code can start with zero because GIDIS can use it to find the 'zeroth' font pattern or the first pattern in the font area. This 'font area' can refer to the regular Gothic font or to a font file.

"The ASCII codes that you can use in your font file are limited to those codes that have a keyboard character. Otherwise, how in the world would you tell SIGHT that you wanted the pattern stored under ASCII code 20, for example? But you can tell SIGHT to use the pattern stored under ASCII code 65 by pressing the capital letter A.

"I bet you never knew how much goes on with a simple keypress!"

No, you say, it sure seems complicated. But now I know that for each letter on the keyboard, there is a corresponding number, called the ASCII code, which the keyboard passes to the computer so GIDIS can find the pattern for that character in the proper font area and draw it on the screen. Also, although there may be 256 possible patterns I may create for a font, I can only create patterns for those ASCII codes which have a key I can press, because SIGHT does not let you access patterns stored under ASCII codes that do not have a keyboard key.

"You've got it," says the Shopkeep. "And notice that Compose Character keys are available from the Board by pressing the proper sequence when you are in the SET-UP Menu's 'select keyboard key' option.

"One other thing I'd like to mention: Remember when you pressed ADDITIONAL OPTIONS on the Board to display what was in your FNT file? You were asked to give the ASCII range to be displayed, and I had you just press Return twice to use the default range of 000 - 255. Now you should know what this range refers to: You can limit the characters displayed by specifying the appropriate ASCII values."

Fill Patterns

"I'll answer this question before you ask it," the Shoppe Keeper says.

"SIGHT allows you to choose from a variety of fill patterns. And where are the fills patterns stored, you ask? Why, in a font file.

"SIGHT accesses fill patterns from a font file almost like it accesses character fonts from a font file. The only exception is that you do not press a character to choose the fill pattern -- you choose it from a presented selection.

"You can also make fill patterns which SIGHT will allow you to use, in the same manner that you make a character font: You draw the fill pattern on the Character Grid and store it under a character. However, there is an extra adjustment that you need to make to the FNT file font before it is translated into the final task (TSK) font file. This subject is discussed in the Advanced Topics section under Chapter 10, Fill Patterns.

"Now it's time for us to get back to the Drawing Board and finish up with the Playing Field. After that, you will have used every box and function key available to you from the Board!"

Chapter 5.

THE PLAYING FIELD

Be sure to review Chapters 2 and 3 to refresh your memory regarding how the function keys operate. Make sure there is a face (or some pattern) on the Character Grid and that the Update Fields (echo) feature is ON.

If you are on the Character Grid, press NEXT SCREEN to advance to the Playing Field; if you are on the Reference Grid, press PREV SCREEN. The Playing Field's border should now be blinking.

Notice that in advancing to the Playing Field, the Function Keys Available box has adjusted the bottom information to read 'Function Keys Specific to the Playing Field.' You should be familiar with the keys listed in the top portion of the Function Keys Available box (ADDTNL OPTIONS through PREV), so their definitions will not be repeated here.

The purpose of the Playing Field is to allow you to manipulate the Playing Field character (in the lower-left corner of that box) as SIGHT might allow you to manipulate it. The Playing Field does not make any attempts to compete with all of SIGHT's advanced functions.

The Playing Field will also allow you display many patterns at the same time in its box. This feature alleviates a tiresome procedure of having to leave the Drawing Board, translate the FNT file into an actual TSK file, run SIGHT, return to the Drawing Board, and re-establish the FNT files through the SET-UP Menu, just so you can see how your characters look when placed next to each other.

Below the Playing Field's box is the line "Arrow keys will MOVE character." Press the right arrow key once or twice now. Notice that the face was moved to the right on the Field. Note: The Playing Field function keys will not affect the pattern currently on the Character Grid.

Arrow keys (move pattern about the grid)

Press the arrow keys to move the face around the Field. Notice that if you try to move the face off of the Field's borders, the face will disappear, but you can move it back onto the field.

PF1 (changes color)

Move the face to the center of the Playing Field. Press PF1 now. Notice that the face is now drawn in a different color. Press PF1 several times to view the four colors available (cyan, blue, green, and white).

PF2 (changes pattern's slant)

Now press PF2. Press PF2 several times. Notice that the face is being drawn with a forward slant. Keep pressing PF2 until the forward slant starts to let up and the face begins to lean backwards. Press PF2 until the face eventually ends up with no slant in either direction.

SELECT+PF2 (changes slant's increment direction)

Press PF2 again several times. Then, press SELECT+PF2. Press PF2 several more times. Notice that after you press SELECT+PF2, the increment direction of the slant is reversed. Therefore, you do not need to "cycle" through the slant to get it to go in the opposite direction.

PF3 (rotate pattern)

Adjust the face again until it has no slant. Now, press PF3 several times. The face will be rotated counter-clockwise about its upper-left corner. Press PF3 until you have performed enough PF3's to return the face to its normal upright position.

Sometimes when you press PF3 some smudges or extra blocks will appear along with the altered pattern. These smudges are not your fault (or the Shoppe Keeper's) and will not appear with or affect your final font pattern. These smudges have to do with certain computations GIDIS must go through to rotate the pattern; sometimes the computations are off by a teeny bit.

I would like to mention here that you cannot transfer the pattern, altered or otherwise, from the Playing Field to either of the Character or Reference grids.

PF4 (reset pattern)

Before you press PF4, press PF1, PF2, and PF3 enough times to scramble the face on the Playing Field. Now, it would be nice to reset the pattern without having to undo it all by hand, wouldn't it? Well, to do so, press PF4 now. The face will appear as it started in the lower left-hand corner of the Field.

SELECT+arrow (alter pattern height/width)

You may change the height and/or width of the pattern on the Field. The increment direction of the change is in regard to the pattern's upper-left corner.

To increase the pattern's height, press the SELECT+down arrow key until you notice an increase in the height. Note: It may take several SELECT+ keypresses to change the height or width due to the round-off produced by GIDIS's calculations. Press the SELECT+right arrow to key increase the pattern's width.

Notice that when you press SELECT, the line below the Playing Field reads "Arrow keys will ALTER character."

Use the other SELECT+arrow keys to decrease the width and/or height. Notice that you can make the pattern only so small. There is no limit to the size increase for a pattern, but the pattern's edges will be cut off if they would extend beyond the borders of the Field.

More than One Pattern on the Field

Press PF4 now to reset the face to its original attributes, then move the face to the top left corner of the Playing Field.

Now, press PREV SCREEN to return to the Character Grid. Press PF1 to reverse the blocks on the grid. The "altered" face should now appear in the lower left-hand corner of the Playing Field. Press NEXT SCREEN to return to the Field. Move the new face up next to the other face already on the Field. Note: If you move the second face over the first one on the Field, a part of the first face may be cut off. You cannot restore the erased part unless you go back to the Character Grid, reset the pattern, go to the Playing Field, and move the face up and exactly over the damaged face. Another note: Lest you forget, anything that happens to a face on the Playing Field will not affect the patterns on any Grid or FNT file in use.

Once you have moved the second face up to and next to the first one, press PF1 to change the color of the second face. Press PREV SCREEN to jump to the Character Grid, and NEXT SCREEN to immediately return to the Playing Field. Press PF1 to change the third face to a color that is different from the first two and move it up next to the other two.

Summary:

(34) Anything you do on the Playing Field does not affect the other Grids or FNT files in use.

(36) You cannot transfer a pattern from the Playing Field to a Grid.

(37) The arrow keys move the pattern around the Playing Field; PF1 will change the color of the pattern; PF2 will change the pattern's slant; SELECT+PF2 will reverse the increment direction of the slant; PF3 will rotate the pattern about its upper-left corner; PF4 will reset the pattern you were last working with to its default size, shape, and position; SELECT+arrow key will alter the pattern's shape.

AND MOST IMPORTANT OF ALL:

(38) When you leave the Playing Field by either pressing PREV SCREEN or NEXT SCREEN, you relinquish control over the last pattern in the Playing Field. When you return to the Playing Field: (a) If there is no pattern in the lower left-hand corner, one will appear; (b) If a pattern already exists in the lower left-hand corner and it differs from the default appearance, a pattern of the default shape and size will plop down on top of it; or (c) if a pattern already exists in the lower left-hand corner and it is in the default appearance, it may just be updated to match the pattern currently on the Character Grid.

If the Character Grid is empty when you jump to the Playing Field, then you will not be able manipulate any patterns.

Except for SELECT+PF4, we have just examined all of the function keys specific to the Playing Field. It is now your turn to experiment. Try making new faces on the Character Grid and jumping to the Playing Field to move the new faces up and out of the way of the lower left-hand corner so you can see all of the faces next to each other.

SELECT+PF4 (clear Playing Field, reset pattern)

Should the Playing Field become filled up and you wish to clear it, or should the Field become littered with pieces of erased patterns, press SELECT+PF4 to clear the Playing Field and reset the last pattern you were working with to the lower left-hand corner.

Once you perform SELECT+PF4, the only way to redisplay all of the faces or patterns that were in the Playing Field box is to start over and move each one again.

As I mentioned at the beginning, this Field is not designed to compete with the more elaborate SIGHT.

What will Clear the Playing Field

Besides SELECT+PF4, anything that causes the entire screen to clear will also effectively clear the Playing Field. The function keys or sequences that will clear the Field are:

a) ADDITIONAL OPTIONS from the Field or any Grid

b) Exiting from the Drawing Board

c) Pressing HELP twice in a row from the Field or any Grid

d) SELECT+PF4 on the Field

e) The SET-UP Menu's "choose an existing FNT file" option (from either Grid)

The list of function keys for the Playing Field appears in Section VI of this manual.

This concludes Section II, the Drawing Board Tutorial.

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How to leave the Drawing Board quickly:

Press EXIT, or a succession of EXITs, until the Exit Options menu appears; then press DO. You will wind up back at the Main Counter.

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Chapter 6.

TRANSLATING A FNT FILE INTO A TSK FILE

Welcome back to the Main Counter. I trust your Drawing Board experience was an enjoyable one.

If you remember, in Chapter 1 I explained that certain magic potions must be concocted to make Pro/SIGHT use your fonts. Well, it is almost time to use those potions.

The faces or patterns that you have created and stored in the FNT file are unusable to SIGHT as they are. The FNT file was designed to work very efficiently with the Font Shoppe only. You must now use the provided option to convert a FNT file into a TSK (task) file so that SIGHT will display your faces properly.

Read the following narrative first; do not choose the translation option yet. You will be told when to choose it.

Install Name

When the Main Counter option "Please translate a FNT file into a TSK file" is selected, the screen will clear and the "Form for Providing an Install Name" will appear, as shown in the figure below.

An install name is the name given to a font file so that it is distinguished from all other font files; the computer also uses the install name to rapidly pinpoint the font file on the disk when GIDIS needs pattern information from it. The install name may be from 1 to 6 characters long, the characters being restricted to those listed below.

Each font file IN USE by Pro/SIGHT or other GIDIS-protocol program must be unique. This is not to say that an install name may not be duplicated in several font files. Only those font files IN USE must have unique install names.

Example: Let's say that you are in a restaurant, and your name is Tracy. You are expecting an important phone call, so you register your name with the maitre d'. You give him an install name of $TRACY. The maitre d' says that someone is already using that install name, please provide him with another. So you give him TRACY$ as an install name. Then, he takes your room, table, and chair numbers. At your table is someone else who goes by the name of TRACY$, but that person did not register with the maitre d'.

While you are eating, a call comes in from a Mr. Gidis for a $TRACY. The maitre d' looks up $TRACY's seating address and goes to that person, not you.

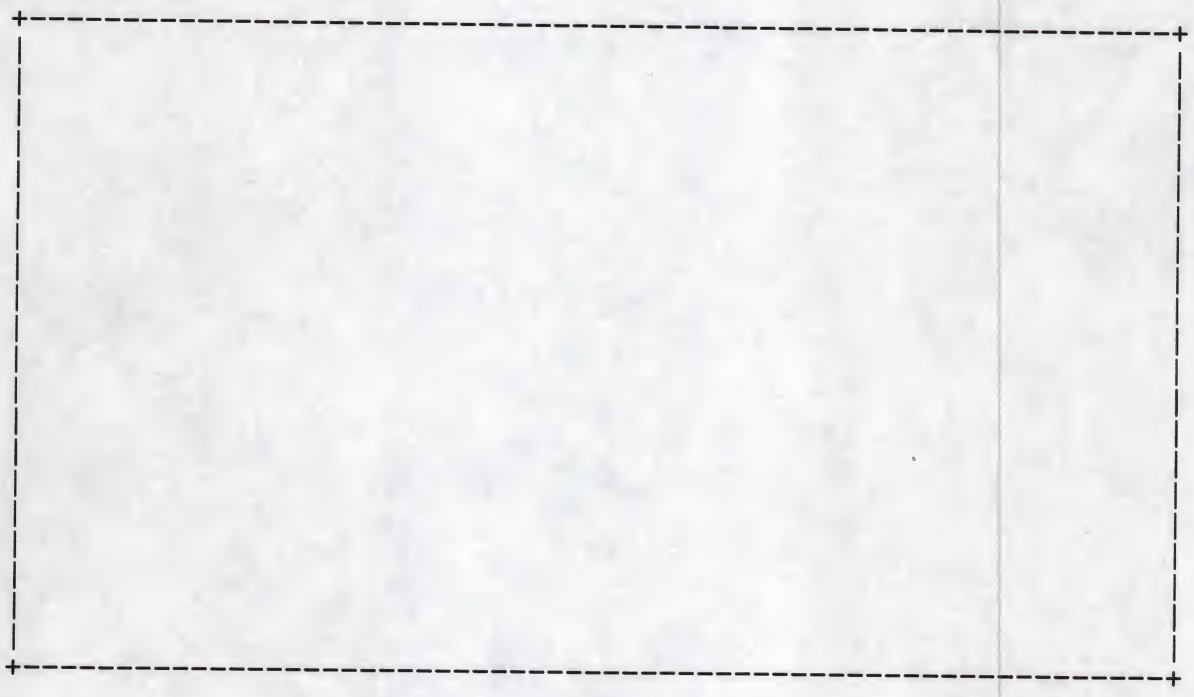

Figure 6-1. Form for Providing an Install Name

A short while later, another call comes in from Mr. Gidis for a TRACY$. You see the maitre d' head for your table. Will he give the message to you or the other TRACY$? He gives it to you, because the other person did not register with the maitre d'. End of example.

When you are creating a picture with SIGHT or displaying a GIDIS file, GIDIS will attempt to find any installed font files referenced in the picture. If GIDIS cannot find a file for an installed name, it will substitute splats or the Gothic font set (which is always on the Pro/300) for the font characters.

GIDIS has the ability to let a program make use of a couple hundred fonts at the same time. Unfortunately, SIGHT only lets you reference three.

SIGHT's Fonts

When you are using SIGHT, you may choose from what appears to be several text fonts to work with. When you press the keypad hyphen in SIGHT, the text fonts will be displayed along the bottom of the screen, like so:

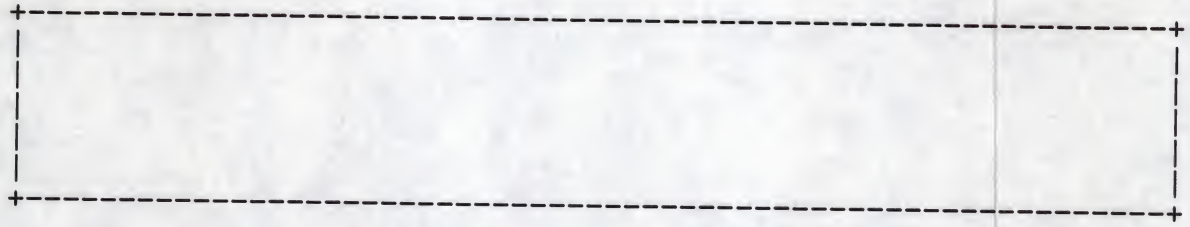

Figure 6-2. SIGHT's Font Menu

The letters are shown in lower case, some of them small, some large, and some slanted this way or that. When you choose one of those letters, text will be drawn in the picture using the font style of that chosen letter. For example, if you choose the "a," the text will be drawn tiny. The following table describes each available letter.

Note: A size of "normal" refers to the typical size of the text you see on the screen. Example: The text you see on the computer's Main Menu is of a normal size. The Gothic font refers to the normal Pro/300 font set.

Letter	Height	Width	Font	Slant
a	half normal	normal	Gothic	none
b	normal	half normal	Gothic	none
c	normal	normal	Gothic	none
d	normal	normal	Gothic	forward
e	3 x normal	3 x normal	Gothic	none
f	3 x normal	3 x normal	Gothic	forward
g	2 x normal	2 x normal	FNT$09	none
h	2 x normal	2 x normal	FNT$09	forward
i	4 x normal	4 x normal	FNT$09	none
j	4 x normal	4 x normal	FNT$09	forward
k	2 x normal	2 x normal	FNT$10	none
l	2 x normal	2 x normal	FNT$10	forward
m	4 x normal	4 x normal	FNT$10	none
n	4 x normal	4 x normal	FNT$10	forward

If you select a text style from "a" through "f," the font information will come from the font supplied with the Pro/300. A separate font file is not used or needed for these styles.

If you select a style from "g" through "j," SIGHT will use one of its font files to provide the font information. This font file is named FONT09.TSK and it resides in the hard disk directory [ZZFONT]. When you installed the SIGHT application, this font file was moved to that directory.

If you select a style from "k" to "n," SIGHT will use a second font file to provide the font information. This font file is named FONT10.TSK and it also resides in the hard disk directory [ZZFONT], as placed there by the installation process.

These are the three text fonts that you may reference when drawing characters in a picture. One came with the Pro/300, two came with the application. The names of the provided font files, FONT09.TSK and FONT10.TSK, have no significant meaning to you. It wouldn't matter what they are named anyway, since you choose the font style you want by choosing the appropriate letter ("a" through "n"), right? Right.

You may have initially thought that there were seven fonts being used, one for each style of letter shown. Well, there are not, because if you remember how you manipulated a face in the Playing Field, you will realize that GIDIS allows you (actually the program) to send it commands to alter the provided face. This way, a single face pattern can be slanted and rotated, so you do not have to make several faces -- one normal, one slanted, and one rotated.

Now, you must be thinking, why did I go through the trouble of creating those faces for a font file if SIGHT only references three fonts and two of them are named FONT09 and FONT10? What in the world will make SIGHT use my font file after it has been translated from a FNT into a TSK? There isn't any apparant means of selecting another font file from SIGHT.

The answer is that there is no means of selecting another font file from SIGHT. What you have to do is specify the font file BEFORE you run SIGHT. The way you do that is discussed in Chapter 9, but don't skip there now. Let's continue with the translation option.

Translating the FNT File

Now choose the Main Counter option, "Please translate a FNT file into a TSK file." Then choose your faces font file. The screen that next appears was already explained at the beginning of this chapter. What you need to do now is decide which install name to give your faces font: Either FNT$09 or FNT$10. No other install name (for now) will make sense to SIGHT. If you give an install name of FNT$09, then your faces font will be used instead of the supplied font FONT09. If you give an install name of FNT$10, then your faces font will be used instead of the supplied font FONT10. As mentioned, you cannot replace the Gothic font.

Enter either FNT$09 or FNT$10 now and press Return (it doesn't really matter which one you use).

The screen will clear and some translating information will appear. YOU MAY IGNORE this information and let it scroll by. If you are curious, press HOLD SCREEN to stop and continue the display. I will not attempt to explain this information, as you are probably rapidly approaching the understanding/confusion boundary in regards to FNT files, install names, and SIGHT. This translating information will probably be removed from the next version of the Font Shoppe anyway.

When the translation has completed, you will see the word "Done!" followed by the name of the honest-and-true TSK font file. At this point, press any key to return to the Main Counter and proceed with Chapter 7.

If your FNT file has not been translated successfully into a TSK file, you should examine the appropriate error explanations in Appendix B.

Note: Your FNT file is not affected by this translation process.

P.S. PLEASE use the form provided in Section VI (make plenty of photocopies) to keep track of what install names you have provided for what TSK font files. It will make your life a lot easier, especially if you use the GIDDAP program to display your picture files (you need to tell GIDDAP what the install names are). The Font Shoppe does not keep track of your files' install names, and you will not be able to memorize them all as you create new and different font files.

Chapter 7.

DISPLAYING A TSK FILE'S CONTENTS

You should now be at the Main Counter. You should now have in your current directory a TSK font file. To see what files are in your current directory, press ADDITIONAL OPTIONS for the Main Counter and choose File Services.

The FNT file was the file created by the Drawing Board. The TSK file was the file created by the Main Counter "translate into a TSK file" option.

Return to the Main Counter and choose the option, "Let me display a TSK font file's contents." This option will let you see exactly what went into your TSK file. Choose your faces font file.

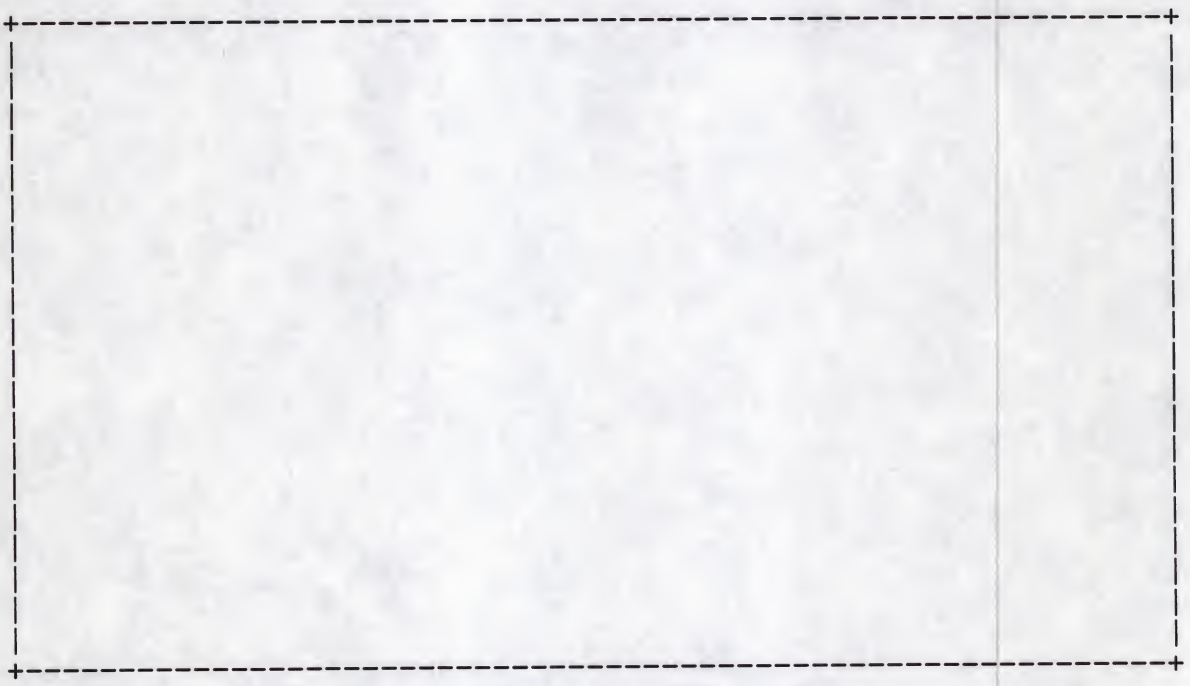

Figure 7-1. Sample TSK File Screen Display

Notice that this option works like the Drawing Board's ADDITIONAL OPTIONS function key. For now, just press Return for the starting and ending ASCII values.

The program will then begin to display what is in the font file. Don't press any keys to continue the display yet, as I want to explain something.

Remember the first face you stored in the font file? You stored it under the capital letter A, or ASCII code 065. Other faces were stored in following letters. Nothing was stored in ASCII codes 000 through 064.

In order to keep your letters properly justified, extra "filler" patterns were added to fill up the ASCII codes 000 through 064. These filler patterns are what you are seeing on the screen right now. This way, when you press the capital letter A in SIGHT, the face stored under the letter A will appear as it is supposed to. If you press a key with an ASCII value lower than A, such as !, $, or ", for example, the filler character will appear on the screen instead. This is discussed more in Chapter 9.

Press any key to continue the display. Continue the display until your faces appear, beginning with ASCII code 065 (which is letter A). Let the display continue after the last face. If any filler patterns appear between faces, it is because you skipped a letter. For example, if a face appears for ASCII codes 065, 066, and 067 (A, B, and C), and then a filler appear appears for 068 (D) before another face appears for 069 (E), it means that you stored a face under A, B, C, and E, but you did not store (or you deleted) a face under D. When your file was translated to a TSK file, not only were enough filler characters added to properly justify your first character, but filler was placed between characters to make up the empty spaces, if necessary.

After the last face is displayed on the screen, you will begin to see splats for the remaining ASCII codes. These ASCII codes were NOT placed into your TSK file. These splats are provided by GIDIS to indicate that there are no more characters stored in the TSK file.

Note: Fill patterns should appear for ASCII codes 000 through 064 EXCEPT for ASCII code 032. 032 is the code for the space bar. If no pattern is stored under 032, the translator will place a blank pattern under 032 automatically. This is done since users might forget to create a blank pattern for the space bar.

Summary:

a) Filler characters are added to the TSK file to make up the ASCII codes from 000 up to the ASCII code below your first character. In the above example, filler characters were added from 000 to 064, and your first face pattern should be stored under 065 (letter A).

b) Next, your faces should appear under their proper ASCII codes. If you left a letter blank between two other letters, a filler character was added to take the place of the empty character.

c) After your last face, splats are displayed. These splats were not added to your TSK file: They are displayed by GIDIS to indicate that there are no more character patterns stored in the TSK file.

Either view the rest of the splats or press EXIT when provided to return to the Main Counter.

Chapter 8.

"Show Me the Install Name for a TSK Font File"

This option is provided in case you forget what install name you gave when you had your FNT file translated into a TSK file.

From the Main Counter, choose the "install name" option. Then choose your faces TSK file from the list.

When the Main Counter reappears, at the bottom of the screen will be listed the install name.

This is the least involved Main Counter option of the lot, besides exiting.

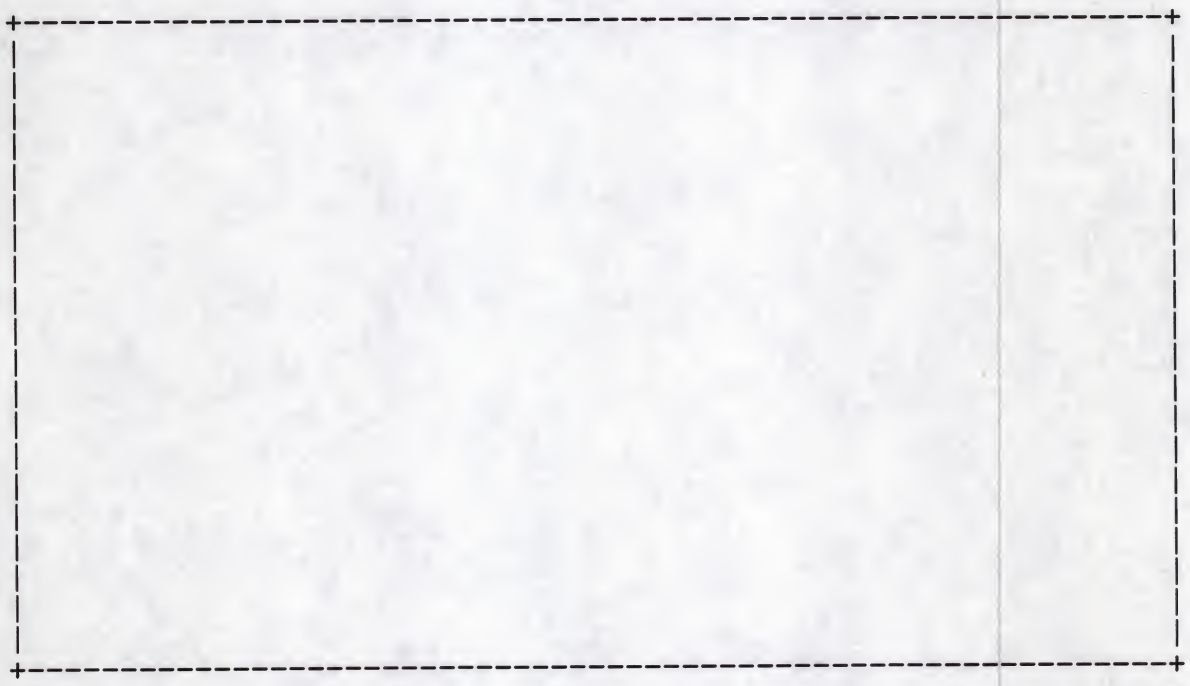

Figure 8-1. Sample TSK Install Name Display

Chapter 9.

Running Pro/SIGHT from the Font Shoppe

If SIGHT is installed on your hard disk, choose "Run Pro/SIGHT" from the Main Counter.

Figure 9-1. The SIGHTkick Menu

The first time you choose this option, the program will attempt to locate SIGHT. This may take only a few seconds, depending upon how many other files already occupy your hard disk. Once SIGHT is found, its directory information will be stored in a file for later use. This way, the program will execute the "Run Pro/SIGHT" option quicker in subsequent uses.

If the program could not find SIGHT and you know it is on your hard disk, contact the architects for further assistance.

If SIGHT was located but could not be installed, refer to Appendix B, Error Messages, for help now. (Note: A more advanced explanation of this procedure appears in the separate document, "SIGHTkick, a Pro/Sight Font Loader.")

When SIGHT is properly located and installed, the SIGHTkick menu will be displayed.

If you desire to substitute a default TSK font file for one of your own, as we do now, you will always have to do it from this menu. We will ignore the fill pattern font for now, but it is fully covered in Chapter 10.

Notice that character fonts 1 and 2 use the [ZZFONT] font files FONT09 and FONT10, and that their installs names are FNT$09 and FNT$10. In order to use your faces file from SIGHT, you must now move the -> to EITHER "Choose character Font 1" OR "Choose character Font 2" and press DO. It does not matter which one you choose. DO NOT CHOOSE THE PATTERN FONT OPTION.

When you press DO, the list of available TSK fonts in your current directory will be displayed. If you chose the wrong option or you wish to choose a different option, press EXIT when this list appears. Otherwise, choose your faces font now.

When the SIGHTkick menu reappears, your face font's file name will appear on the appropriate character font line.

Above the three "choose" options are three information lines. When you choose a character (or pattern) font file, the install name will be extracted from the file itself and displayed in the corresponding information line.

The install names must be a combination of FNT$08, FNT$09, and FNT$10, because that is all SIGHT will be using. That is why the install name found in the font files are only displayed and not used. By only using FNT$08, FNT$09, and FNT$10, you can trick SIGHT into using your own font files.

Move the -> to "Run SIGHT" and press DO.

Once you press DO, the program will install the font files under the shown install names. If a font file could not be installed, an error message will be displayed.

If the font files are properly installed, a modified SIGHT start-up menu will appear. You may choose to create a new picture or to edit an existing picture. For now, choose to create a new picture.

Once you choose the "create" option, allow the program several seconds to get things in order. If, after several seconds, you notice that there is no hard disk activity going on, and everything seems to have frozen up, press Ctrl-C or Interrupt-DO. Although Ctrl-C had been disabled, it is re-enabled by the Font Shoppe at this point just in case things do freeze up. After doing a Ctrl-C, re-enter the Font Shoppe and redo the Run Pro/SIGHT option.

Occasionally, some miscommunication occurs between the Font Shoppe and SIGHT, and both will sit there and wait for the other to say something, but neither will say anything. It is at this time that you need to press Ctrl-C and start over.

NOTE: THIS FREEZING UP MAY OCCUR THE VERY FIRST TIME YOU USE THIS RUN-SIGHT OPTION. IT WILL NOT HAPPEN FREQUENTLY. (If it does, contact the Shoppe architects.) Therefore, do not get Ctrl-C trigger-happy when you run SIGHT and nothing "appears" to happen -- it just may be taking the programs longer than usual to start things up for you. This is especially true if the computer is busier than usual, as in printing out a document through Print Services or running other "background" programs.

When you choose the create-a-picture option, SIGHT's regular drawing screen will appear. At this point, the usual SIGHT commands and functions are in affect.

Press the keypad's hyphen key now. Along the bottom of the screen you will see SIGHT's font-choosing menu/border. Notice that there are some splats in this menu. This is because you did not store any patterns under any lower case letters.

Refer to Figure 6-2 in this manual now. The splats should appear in place of the lower case letters listed for the appropriate install name. For example, if you installed your faces font under FNT$09, then "g" through "j" will be replaced with splats. If you used FNT$10, then "k" through "n" will be replaced with splats. Remember, these splats are okay -- they are provided by GIDIS.

Choose any of the four splats as the text to work with just as you would normally choose text from this menu. Move the arrow to the top of the screen and press the PF4 key to set SIGHT to draw text.

Press the capital letter A now. You should see your first face. Press some more capital letters to make the rest of the faces appear.

Press the exclamation point (!); you should get a "filler" pattern. Press any lower case letter; you should get a splat. If you do not remember why these patterns appear, reread (but do not perform) Chapter 7 NOW.

Press the space bar. Notice that a blank space is drawn, not a filler pattern. A blank pattern was put under ASCII code 032 when you translated the faces font. This is done because you may forget to make a blank pattern for the space bar yourself; otherwise, when you press the space bar, you'd get a filler pattern. Should you store ANY other pattern under ASCII 032, the translator will NOT affect that pattern and will copy it to the TSK file with the rest of your patterns.

Choose the other splats from the text menu to see how SIGHT lets you pick altered forms of the same font. Draw faces in different colors and try zooming and stretching the faces.

When you are finished, exit SIGHT. You can then try using the font under the other install name and see how those faces look.

Chapter 13 explains what goes on with the font files when you save a GIDIS picture in a GID file.

Tutorial Wrap-Up

The other Main Counter options are discussed in the Advanced Topics section. By now, you should know how to use all of the tools you need to create a font. For directions regarding the use of fonts with Pro/Sight, refer to the separate document, "SIGHTkick, A Pro/Sight Font Loader."

You may now go back and add more to your existing FNT file or create another FNT file. Remember: Whether you create another FNT file work with an existing one, you still must have the file translated to a TSK file for it to work with SIGHT.

And as the Sun Slowly Sets...

By now, the sun has touched the horizon, and the town square is lit with an orange glow. The air has cooled. The Shoppe Keeper has turned off the large overhead fan.

You both step outside. The Shopkeep grabs the broom he left by the door and sweeps a little.

"A final friendly word of advice," he says. "The first thing you mentioned was about fitting all these boxes and circles into a picture. You don't need all that. Keep it simple. Don't go fitting in all these new fonts into a picture either, or you'll clutter things up as you did before."

I'll keep it in mind, you say. I appreciate your help. And thanks for putting those new fonts on my diskette. I can't wait to show the others at work tomorrow all that I've learned.

Don't mention it," says the Shop Keeper. "And stop by anytime you have any questions. I'm open 24 hours a day, 7 days a week, and twice as long on holidays."

You amble back up the boulevard. You pass the bookstore, the cafe. Evening settles in on the small multitasking town.

-- The End --

...with apologies to Mr. Butterbur.

Section IV.

ADVANCED TOPICS

Chapter 10.

FILL PATTERNS

Note: A fill pattern FNT file is on the [FONTSHOPD2] diskette and may be copied to your hard disk for your examination and use in the Font Shoppe.

Pro/SIGHT allows you to choose from any of 61 different fill patterns. Its fill pattern border/menus will display 65 fill patterns in all, because the first fill pattern, solid, is repeated at the front of each border/menu. The solid pattern is not placed into the fill pattern font file more than once -- SIGHT automatically repeats the first fill pattern on each advancing menu.

SIGHT's fill patterns are stored in the font file FONT08.TSK along with the character fonts (FONT09 and FONT10) in directory [ZZFONT]. The install name for the fill font file is FNT$08.

You create a fill font file in the same manner in which you create a character font file. You also translate a fill font file in the same manner. There is, however, an intermediate step which shall be explained shortly.

When you create patterns for the fill font file, use the entire Drawing Board grid. Fill patterns do not have any "decenders," per se. The entire pattern is repeated to fill a shape, and there are no spaces added between the filled patterns.

Up to the first 61 fill patterns in a fill font file will be available from SIGHT. If you place more than 61 patterns in a file, SIGHT will ignore the extras. If you place less than 61 patterns in a fill font file, SIGHT will repeat its "dither" fill pattern to make up the rest (just like GIDIS adds splats to make up the rest of your characters up to ASCII 255). This dither pattern is not placed in your fill font files, just like the splats are not placed into your character font files.

SIGHT allows 61 fill patterns from ASCII 0 to ASCII 60. Fill patterns start at ASCII 0 because they are abstract and you do not press letter keys to access them -- you choose them from

the menus. When you are creating fill patterns on the Drawing Board, start storing them from the capital letter A on up. You will see what to do about altering the ASCII values soon.

Let's assume that you want to use your faces font as a fill pattern font (or whatever fill font you have created).

Since your patterns begin at ASCII 065, SIGHT will ignore them, because SIGHT will use at most ASCII patterns 000 through 060 (a total of 61).

After you have left the Drawing Board, choose the "translate a file into a FNT file" option from the Main Counter. Then, choose the "Reconfigure FNT file option." Select the appropriate FNT file from the list.

After you have chosen the FNT file, you will see a screen which reads:

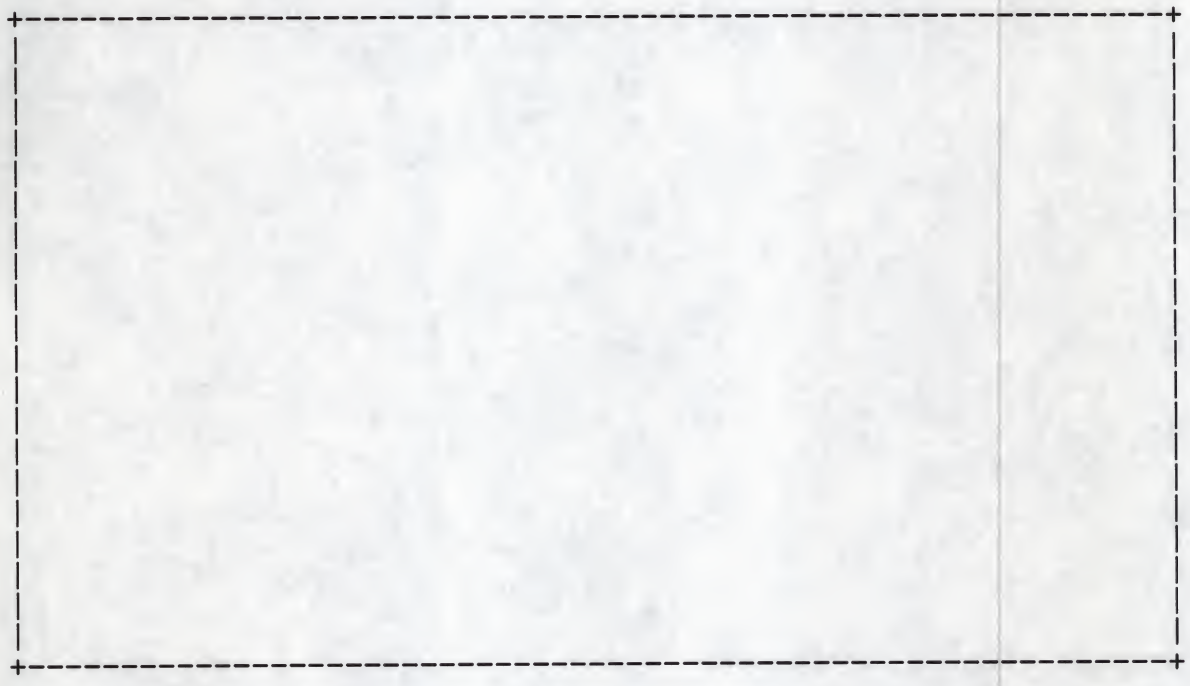

Figure 10-1. Form for Reconfiguring a FNT File

Since you want your patterns to start at 000 and the first pattern is stored under 065 (letter A), enter -65 and press Return. The program will then create the FNT file with the same name and higher version number. The older FNT file will not be deleted. Now, your patterns start at ASCII 000.

From the Main Counter, choose the option to translate a FNT file into a TSK file. Choose the reconfigured FNT file from the list. Use an install name of FNT$08.

The fill pattern font will then be created. Choose the "Run PRO/SIGHT" option from the Main Counter.

You can load whatever character fonts you wish into fonts 1 and 2. Now, choose to change the pattern font and indicate your new TSK file.

Choose the "Run Sight" option. Create a new picture.

When you are in SIGHT, press the F13 key once. Your new fill patterns should appear along the bottom border/menu. Press F13 again and the next available set is displayed. Notice that the dither pattern is provided after your available patterns are exhausted. There may also be filler patterns if you had not used a letter between two other letters. Also, one of the patterns may be blank -- this is the space bar blank provided by the translator; the translator didn't know this was a fill file, it translates all FNT files into TSK files the same way. Keep pressing F13 until the first set of fill patterns are redisplayed.

Now, draw some shapes with fill, and choose different fill patterns.

Notes:

(a) The install name of FNT$08 is used to indicate a fill pattern font. This name is just as arbitrary as was FNT$09 and FNT$10. You don't need to understand it, you just need to use it.

(b) Notice that the fill patterns are drawn kind of small as compared to the way SIGHT draws the character fonts.

(c) If there are more than 32 fill patterns in a fill TSK file, you can load that file in as a character font (using an install name of FNT$09 or FNT$10). Then, when you press the keys with ASCII codes starting at 032, you can use fill patterns as strange letters.

(d) If you reconfigure a character font so that it begins with ASCII 0, you can use that font as a fill pattern font by using an install name of FNT$08. This way, the letter patterns will be used as fill patterns.

Suggestions:

(a) Since SIGHT automatically repeats the fill pattern in the first slot in all of the fill border/menus, you may want to make this pattern a solid one -- solid is the most used and it will be easier to reach from any fill menu.

(b) Start your fill patterns under the capital letter A and work up from there. Then, when you reconfigure the fill font file, you just have to specify -65 to properly align the patterns with ASCII code 000.

Summary:

(a) Start creating your fill patterns from capital A and work your way up.

(b) Reconfigure the fill FNT file by -65.

(c) Translate the FNT file into a TSK file. Use FNT$08 as the fill pattern install name.

Chapter 11.

PROSEGRID.TXT AND EDTGRID.TXT

The above two text (TXT) files were placed in the [USERFILES] directory of FONTSHOPD2. They are not copied to your hard disk during the installation process.

These files are provided for the following reasons:

(a) You may not wish to use the Drawing Board to create your font files. You may prefer to work through a word processor or text editor.

(b) You may wish to create a font and have the patterns in a text file for easier revision, storage and/or communications tranfer to another Pro/300.

Note: Other word or text processors/editors may be used instead of EDT or PROSE, but there is no guarantee that the resulting files will be usable by the Font Shoppe.

The TXT file has to be translated into a FNT file in order for the FNT file to be translated into the TSK font form. The translation process is explained below.

Creating a Font with EDT

EDTGRID.TXT contains the template for creating a font file as well as a sample grid. Rather than repeat the sample below (you can have Print Services print out the file), I will further explain its contents.

A typical grid looks like the following in Figure 11-1.

Along the bottom are column numbers; along the left side are the row numbers; the total grid is 16 by 16, just like the grids on the Drawing Board. To create a pattern on the grid, add capital X's where you wish the filled-in blocks to be. To position an X correctly in a row or column, use the space bar to add the proper quantity of spaces. DO NOT USE THE TAB TO ORIENT YOUR X's.

All other characters that may appear in the grid will be ignored. Therefore, you may use periods or whatever to help orient things and leave the periods there if you wish. Only capital X's are used to create the final pattern.

The outline of the grid as shown above must not be altered -- do not try to add extra rows or delete any rows. You may add comments as shown above as long as they do not get in the way of the grid pattern.

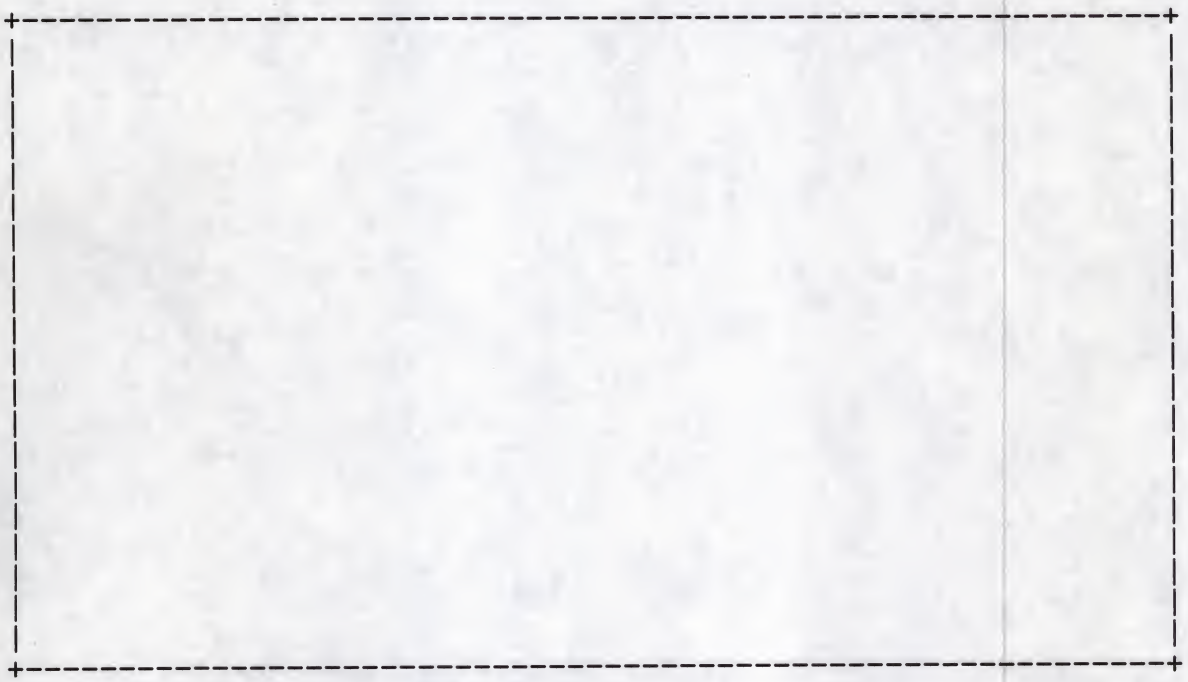

Figure 11-1. A Typical EDT-Created Grid

As shown in the sample TXT file, place the three-digit ASCII code in the space provided at the top of the grid. For example, ASCII 0 should be written as 000 and ASCII 65 should be written as 065.

You may duplicate the template grid to create as many character or fill patterns as you require, as long as the ASCII codes remain between 000 and 255, inclusive. If you use an ASCII code outside of that range, an error message will be displayed, and the translation will stop. Also, do not duplicate an ASCII code, or the translation will stop.

When you duplicate the template grid, do so as shown in the sample TXT file, WITH NO BLANKS BETWEEN THE BOTTOM OF ONE GRID AND THE TOP OF THE NEXT. If If you leave blank lines between grids, an error will occur.

The ASCII codes do not have to be in numerical order.

Creating a Font with PROSE

PROSEGRID.TXT contains the template for creating a font file as well as a sample grid. Rather than repeat the sample below (you can have Print Services print out the file), I will further explain its contents.

A typical grid looks like the following:

Figure 11-2. A Typical PROSE-Created Grid

Along the bottom are column numbers; along the right side are the row numbers; the total grid is 16 by 16, just like the grids on the Drawing Board. To create a pattern on the grid, add capital X's where you wish the filled-in blocks to be. To position an X correctly in a row or column, use the space bar to add the proper quantity of spaces. DO NOT USE THE TAB TO ORIENT YOUR X's.

The remaining explanations are identical to those presented in the above EDT section, so please refer to that section now.

TXT-to-FNT Conversion

By choosing the Main Counter option "translate a file into a FNT file", you may have a TXT file converted into a FNT file. IT DOES NOT MATTER WHICH TXT TRANSLATION YOU USE. Although you may use PROSE or EDT to edit either of the template TXT files,

they have identical grid placements and arrangements. Therefore, if you do not know what kind of editor was used to create a TXT file, you may choose either TXT translation process.

Two TXT options are provided because:

(a) The two specified translations show what editors will produce TXT files for use with the Font Shoppe (EDT and PROSE)

(b) Two template TXT files were provided for easier use within the specified editor; therefore, to reduce user anxiety, two translation options are listed.

After a TXT file is converted into a FNT file, you may:

(a) Translate the FNT file into a font TSK file

(b) Use the FNT file from the Drawing Board like any other FNT file

You may not have a FNT file translated back into a TXT file.

Chapter 12.

???-TO-FNT FILE TRANSLATION COUNTER

This counter is available from the Main Counter by choosing the option "Please translate a file into a FNT file." This option is provided to allow a user to have font files of different origins converted into something the the Drawing Board can work with.

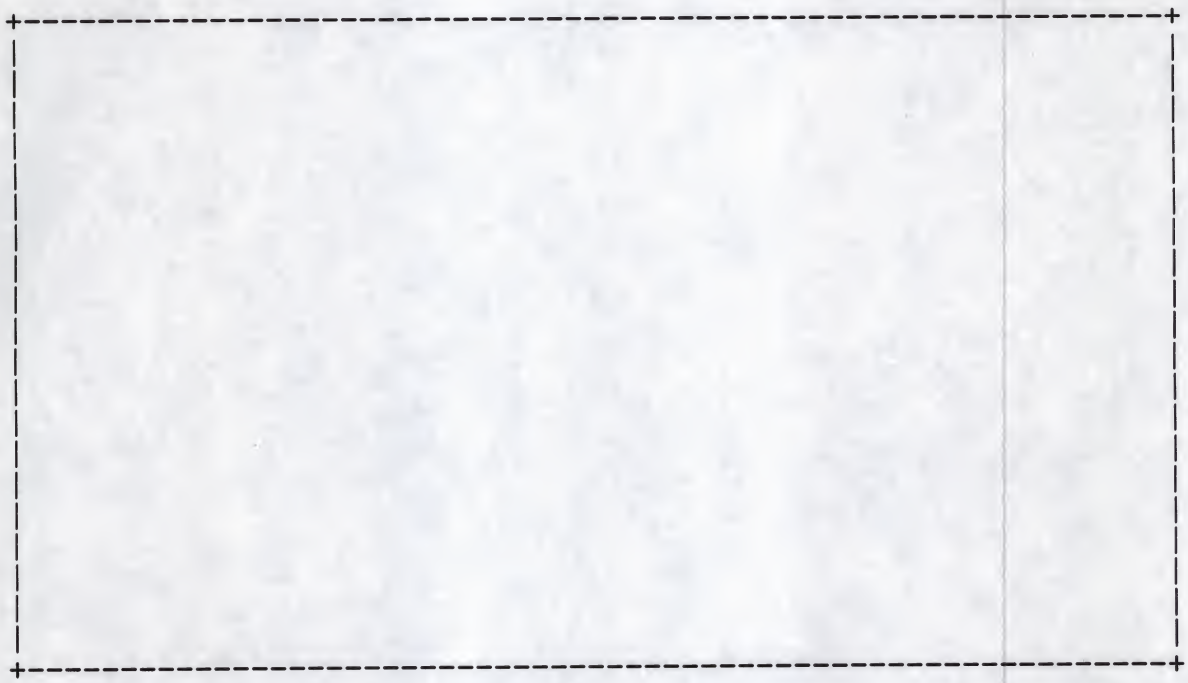

Figure 12-1. ???-to-FNT File Translation Counter

The purposes of the different types of conversions are explained below. All files, if successfully translated, will become FNT files. The FNT files may then be edited from the Drawing Board and/or translated to TSK font files for use in SIGHT.

All of the translations work in the following manner:

(a) You choose the translation option you desire

(b) You choose the file that you wish to have translated from a list

(c) The file will then be translated into a FNT file

(d) The original file is not altered or deleted. The translated file will have a FNT extension, but the file name will be the same as the original file

During the translation process, conversion information will appear on the screen. YOU MAY IGNORE this information and let it scroll by. If you are curious, press HOLD SCREEN to stop and continue the display. If error messages appear, look them up in Appendix B.

Note: FNT files cannot be translated into TXT files.

PRO/SIGHT *.TSK

Most any font TSK file that works under Pro/SIGHT may be translated into a FNT file for use under the Drawing Board. This option is useful for:

(a) Anyone who has lost or deleted their original FNT file; the TSK file may be translated back into the FNT file

(b) Anyone wishing to modify TSK files supplied with SIGHT

(c) Anyone wishing to modify TSK files given to them by others for use in SIGHT

If YOU "Made" the TSK File...

When you translate a TSK file into a FNT file, and the TSK file was something you had created (by having a FNT file translated into a TSK file), the patterns in the subsequent second-hand FNT file should all be associated with their proper characters. For example, if you had stored an A pattern under the letter A in the original FNT file, the second-hand FNT file should also have the A pattern stored under it. I.e., the second-hand FNT file should be identical to the original FNT file, EXCEPT: The second-hand FNT file may also have those "filler" patterns in them.

If, for some reason, the second-hand FNT file is not identical to the first one as explained, then contact the architects. Nothing should be changed or altered in a FNT-to-TSK-to-FNT translation YOU performed.

If **YOU DID NOT** "Make" the TSK File...

If the TSK file you are translating into a FNT file is one you did not have the Shoppe do (by a FNT-to-TSK translation) -- if the TSK file came with SIGHT or someone gave it to you -- then you should expect the unexpected with the resulting FNT file.

The Font Shoppe is not the only program in the DEC world that converts a file with font patterns into a TSK file. And TSK files are not as straightforward as they may seem. If you wish, you may skip the following and just continue reading with "PROSE *.TXT" below. Otherwise, if you wonder why your resulting FNT file seems to be "scrambled," read the next section.

TSK Font Files in Detail

A font TSK file must contain the information GIDIS needs to access a pattern to draw on the screen when a letter is pressed. This information consists of two things: A character index and a character patterns table.

Let us assume that a TSK file contains the patterns for the upper-case letters of the alphabet, ASCII codes 65 through 90. If the Font Shoppe is used to create the TSK file, it will do the following:

(a) create a character index, beginning at ASCII 0 and ending at ASCII 90

(b) add filler for the first 65 (0 - 64) character patterns in the patterns table and then add the patterns for the upper-case letters

When, say, an A is pressed, GIDIS will go 65 numbers deep into the character index and find a 65. This now tells GIDIS that the pattern is 65 patterns deep in the patterns table. GIDIS will then skip the first 65 patterns in the patterns table (0 through 64) and use the next pattern as the one to draw on the screen for an A.

If an exclamation (!) is pressed, GIDIS will go 33 numbers deep into the character index and find a 33. GIDIS will then skip the first 33 patterns in the patterns table and use the next pattern, which will be the filler pattern.

If a lower-case a is pressed, GIDIS will find that the highest pattern index is 90, and so it will not bother using the patterns table -- it will just display a splat.

Now, if you translate this TSK file back into a FNT file, the Shoppe will start placing the patterns into the FNT file from ASCII 0 (the Shoppe ignores the character index), and since in this example there were filler patterns to make up the ASCII codes from 0 to 64, then ASCII codes 0 to 64 in the FNT file

will contain those filler patterns. The capital letter patterns will be placed under their respective ASCII codes. Splats will not be placed into the FNT file.

Then, if you choose to display A from the Drawing Board's Reference Grid, you will get your A pattern. If you choose the exclamation point, you will get a filler pattern. If you choose the lower-case a, you will get an error message about no pattern being stored under that character.

If something other than the Font Shoppe is used to create the TSK file (such as was used to create the SIGHT-provided TSK files), the index and patterns table may be different. Let's say the capital letters are stored in the TSK file without filler patterns (they seem to start at ASCII 0).

When an A is pressed, GIDIS will go 65 numbers deep into the character index an find a 0 (zero). This tells GIDIS that the pattern is zero deep in the patterns table. So, GIDIS will use the first pattern in the table to draw the A. If a C is pressed, GIDIS will go 67 numbers deep into the index and find a 3. GIDIS will then go 3 patterns deep into the table and use that pattern. If an exclamation point is pressed, GIDIS will go 33 numbers deep into the index and find the patterns-table number for either a fille character or whatever the designer of the font had in mind (like a reverse question mark). Unlike the Font Shoppe, where a dozen or so filler patterns may be added to the TSK file (each filler ASCII code points to its OWN filler pattern), the TSK file may be organized so that ALL filler ASCII codes point to ONE filler pattern.

Therefore, if the TSK file is translated into a FNT file, and there are no filler patterns for EACH filler character, the patterns may end up being stored under the wrong character meant to produce that pattern. Also, some patterns may be out of order, since such a thing can be straightened out through proper pointing with the TSK character index.

Since the user is not allowed to set up a character index for the TSK file, the explained method is used to place FNT patterns into a TSK file. Also, since the user will mainly be working with his or her own font files, or other font files produced by the Font Shoppe, provisions were not made to take care of the odd translations of one or two SIGHT-provided font files. If you do translate a TSK file into a FNT file and you want to "straighten things up," then move the characters one at a time into a new FNT file (from the Reference Grid to the Character Grid on the Drawing Board). If you need to access a character that the Drawing Board does not let you get to (such as ASCII codes below 32), then you must reconfigure the FNT file as explained below.

PROSE *.TXT

The purpose of the PROSEGRID.TXT file is explained in Chapter 11. If you are unsure about which word processor or editor created the TXT file, you may use EITHER the PROSE option or the EDT option, because they both perform the same translation operation.

FNT files cannot be translated back into TXT files.

EDT *.TXT

The purpose of the EDTGRID.TXT file is explained in Chapter 11. If you are unsure about which word processor or editor created the TXT file, you may use EITHER the PROSE option or the EDT option, because they both perform the the same translation operation.

FNT files cannot be translated back into TXT files.

Any Other Valid Font File *.TSK

This option is IDENTICAL to the option provided by the PRO/SIGHT *.TSK translation described above. It does not matter which of the two you choose to have a TSK file translated into a FNT file. Two options are provided to reduce user anxiety, since a user may not always be certain whether a TSK file was created specifically to be used in SIGHT.

Reconfigure *.FNT

If you have followed the example in Chapter 10, Fill Patterns, you will be familiar with reconfiguring a FNT file. If you have not read that chapter, please do so. The material described there is not repeated here to reduce the length of this document. (Note: See Figure 10-1, Form for Reconfiguring a FNT File.)

When you reconfigure a FNT file, the original file will not be altered or deleted. The reconfigured FNT file will have the same name as the original file, though, and have a higher version number.

The reconfigure option is provided for the following reasons:

(a) to alter the ASCII codes to move some patterns to ASCII codes NOT accessible from the Drawing Board; for example, a fill pattern file should be reconfigured to start with ASCII zero

(b) to alter the ASCII codes to move some patterns to ASCII codes that ARE accessible from the Drawing Board; for example, you may want to edit the patterns from a file someone else has created, and the patterns start at ASCII zero

Sometimes you may need to reconfigure a FNT file two times to create two other FNT files so that one has the upper ASCII codes moved down and the other has the lower ASCII codes moved up to a range accessible from the Drawing Board.

Duplicate Option Choices

As mentioned, both of the TXT options are identical, and both of the TSK options are identical. The programming code used in these options were not duplicated (both TXT options use the same routine and both TSK options use the same routine). Therefore, although the Font Shoppe application is large, is was not made larger through the provision of duplicate option choices.

How to Chop Out the Filler Put in by a TSK-to-FNT Translation

If, for example, a TSK font file starts with the capital letter A, when the TSK is translated into a FNT file, all of the filler patterns from 000 through 064 will also be put into the FNT file. This can be annoying if you wish to add patterns below A, because there will already be stuff there. The quickest and easiest way of getting rid of the filler patterns from the FNT file is to perform the following:

(a) Choose to reconfigure the FNT file.

(b) Reconfigure with a value of -65. This will cause A to become 000, B to become 001, et cetera, and the filler patterns will be cut out of the new FNT file.

(c) After you have reconfigured the FNT file and have gotten a second FNT file, reconfigure the second FNT file with a value of 65. This will shuffle A back up to ASCII 065, B back up to 066, et ectera.

(d) Use the third FNT file, which will now not have filler patterns from 000 through 064.

This same method can be used to get rid of any other lower-end or upper-end patterns from a FNT file. You usually need to perform two reconfigures, each time specifying the FNT file with the highest version number.

P.S. If you do not want to lose old versions of FNT files when you clean up old versions (purging), then rename the old versions.

Chapter 13.

GIDIS PICTURE FILES AND FONT FILES

When you create GIDIS pictures and save them in GID files, if you had used (either your new or SIGHT's provided) fonts and patterns, you cannot just forget about what fonts were used in what pictures. SIGHT uses FNT$08 for just about all of its fill patterns, including the solid fill. You may have used FNT$09 or FNT$10 (the Gothic font, remember, is always available to to GIDIS on all Pro/300's). The next time you edit the picture, or display it, the fonts you used must be installed. Why?

What SIGHT does is put calling references to FNT$08, FNT$09, and FNT$10 IN EVERY GID FILE, WHETHER YOU ACTUALLY USE THESE FONTS OR NOT.

If you do not use the elements of the font files in a picture, then you do not have to worry about GIDIS not finding the right font files, because your picture does not draw with them anyway. (GIDIS does not stop drawing a picture or display error messages if it cannot find a font file.)

If, on the other hand, you do use elements of any font files, then the same font files must be installed when you edit or display the pictures. Otherwise, if GIDIS cannot find the files for those fonts, it will use splats or default to the Gothic characters wherever there is a character or pattern reference to drawn them.

To keep track of what font files you have used with what pictures, use the form provided in Section VI (photocopy it first). If you do not, and you have plenty of TSK fonts hanging around your hard disk, you will never straighten out what picture uses what font files!

If you give copies of your pictures to someone, be sure to include:

(a) a description similar to what you wrote on the form in Section VI

(b) all of the required font files

Chapter 14.

PRINT OR DISPLAY A FNT FILE'S CONTENTS

This option was visited briefly in the Section II tutorial. This option is accessed by either of two methods: (a) Press the ADDITIONAL OPTIONS key while on the Drawing Board, or (b) choose the appropriate option from the Main Counter. Both methods utiltize the same routines, so this option is not duplicated in the program code.

After you choose this option, you are asked to pick the FNT file to print or display. Then, you are asked to give the starting and ending ASCII range. To display or print everything that may be in the file, choose a range of 000 to 255. To display or print just one character pattern, indicate the same ASCII code twice, for example 065 to 065 or 109 to 109.

Display Option

The display option will draw two lines worth of characters on the screen and then prompt you to press EXIT to quit or any other key to continue. If you press EXIT, you will be returned to either the Main Counter or the Drawing Board, depending upon where it was you chose the display/print option.

The display option will draw the character patterns until the range set by you is completed or the FNT file's contents are exhausted.

Print Option

The print option will print up to nine character patterns per page. The patterns are printed on rectangular grids, and diamond shapes are used to show which blocks are filled in. At the top left corners of the grids, the DBK's will be shown (see the ASCII Character Chart in Section VI for the list of available DBK's). At the top right corners, the ASCII numbers are printed.

WARNING: Before you choose this printing option, be sure and set your printer to DRAFT quality printing (either have the AUTO/MAN and LETTER/DRAFT keys both up or both down). This is necessary for two reasons:

(a) If the printer is on draft, the grids will be printed at 9 per 80-COLUMN page; if the printer is on letter, the grids will be printed at 9 per 132-COLUMN page.

(b) DRAFT-quality printing will go a lot (a very lot) faster than LETTER-quality printing.

To halt the printout, press CANCEL. You can then press RESUME to continue or EXIT to quit.

Technical note: The printer's vertical and horizontal pitches are altered when the printing option is chosen in order to make the grid's lines touch together (although the lines may appear a bit wobbly in draft mode). The pitches are then reset to normal to print out the headings. The pitches are also reset to normal when the printing has finished. Therefore, if you had set the pitches yourself to some other values, this is to let you know that those values may be changed by this printing option.

In addition, if you press CANCEL and then EXIT to quit the printing option, the pitches may not get reset to normal. Also, the characters may still be in VT100 mode. To reset the pitches (and everything else) to normal, just turn the printer off and then on again.

Figure 14-1. Sample FNT File Screen Display

Figure 14-2. Sample FNT File Printout*

*Note: Figure 14-2 was printed by a laser printer and then reduced in size.

Section V.

APPENDICES

Appendix A.

GLOSSARY

ASCII	Numerical coding standard for keyboard and non-keyboard characters (American Code for Information Interchange).
Butterbur	Runs the Prancing Pony.
CGLFPU	See CORE graphics.
character font	TSK font files used to draw text characters in SIGHT.
Character Grid	Drawing Board utility. Lets you create and store patterns in a FNT file.
characters	All of the numbers, letters, and symbols in a font.
Control-C	Quick-and-dirty way of quitting an application; disabled in the Shoppe and SIGHTkick, except for times when application may freeze up.
CORE Graphics	Lesser graphics scribe than GIDIS, but more programer-friendly.
DBK	Drawing Board key (see Section I).
DEC	Digital Equipment Corporation
descender	Tail of a characters (such as g, j, p, q, and y) that hangs down below the imaginary line that the sentence sits upon.
Drawing Board	Font Shoppe utility, lets you create and edit fonts.

EDT	Word processing application from DEC.
filler	Pattern used by the Font Shoppe to fill in and justify empty ASCII codes in the TSK file.
fill character	Used to create a fill pattern; a fill pattern is made up of one character repeated many times.
filler character	See filler.
fill font	TSK font files used to draw filler patterns in SIGHT.
fill pattern	Pattern used in SIGHT to fill a shape.
FNT	File created and used specifically with the Font Shoppe to store font grids.
font	Set describing how characters look.
font file	See FNT and TSK.
FNT$08...FNT$10	Install names for the TSK files FONT08, FONT09, and FONT10; these files come with SIGHT.
freezing up	Happens if the Font Shoppe and SIGHT won't talk to each other and both wait for a response; press Control-C at this point.
GIDDAP	Application which displays GIDIS picture files (like those created by SIGHT).
GIDIS	The master graphics-drawing scribe on the PRO/300 (General Image Display Instruction Set).
GIDIS file	Picture file created and edited by SIGHT (file extension .GID).
GIDIS protocol	Using GIDIS or CORE Graphics to draw on the screen.
grids	Areas on the Drawing Board used for pattern manipulations.
install name	Required in a TSK file for proper computer identification.

Interrupt-DO	See Control-C.
LA100	DEC printer that works with the Font Shoppe and can print GIDIS pictures.
pattern	What makes up one character.
Playing Field	Drawing Board utility, lets you manipulate a character's appearance without changing its grid pattern.
Professional	Pro/300 series computers.
PROSE	Word processor application from DEC.
Pro/SIGHT	See SIGHT.
reconfigure	Alter the ASCII values in a FNT file.
Reference Grid	Drawing Board utility, lets you recall and delete patterns from a FNT file.
SELECT+	See SELECT-plus.
SELECT-plus	Allows you to access further functions on the drawing board.
Shoppe Keeper	Runs the Font Shoppe. Offers you iced tea and lemonade.
SIGHT	Application which draws and manipulates graphics, from DEC.
SIGHTkick	Application which runs SIGHT, explained in the separate document, "SIGHTkick, a PRO/SIGHT Font Loader."
splats	Term taken from DEC documentation that represents a checkboard pattern that is usually created when a character or fill pattern specified has not been defined.
stamp	The flashing cursor on the Drawing Board's Character Grid.
stamper	See stamp.
translate	Rendering a file from one form into another, from something one program understands into something another program understands.
TSK	Final file form of a font; file created for use by SIGHT or other GIDIS-protocol programs.

Appendix B.

ERROR MESSAGES AND WARNINGS

Error messages are listed for each of the options available through Main Counter selections. Following the errors are the reasons why the error message may have been prompted.

A suggested fix for an error is desribed by the reason for the error. For example, "the FNT file has become locked" means that you should check to see if the file is locked, and then unlock it.

The reasons for the errors are listed in approximately increasing difficult-to-fix and difficult-to-comprehend order. Most of the errors are caused by simple reasons and are solved with simple solutions. It's that small percentage of problems that may need assistance from the architects to be cracked and resolved.

Drawing Board

Note: HOW TO ACCESS DISK SERVICES WITHOUT LEAVING THE DRAWING BOARD:

(a) Press SET-UP from either the Character or Reference Grid.

(b) Choose the select-an-existing-FNT-file option.

(c) When the list of FNT names appear (if any), press ADDITIONAL OPTIONS.

(d) Disks Services will then appear.

(e) After you have used Disk Services, press EXIT to leave it, EXIT again to leave the FNT-choice menu, and EXIT again to leave the Set-Up Menu.

A pattern is already stored under that keyboard key!

-- You already saved a pattern under that key.
-- You are using the wrong FNT file.
-- A filler pattern occupies that key.
-- Someone else has stored a pattern under that key.

There is a problem in fetching the pattern for the key ...

-- You removed the diskette the Shoppe was accessing the FNT file from.
-- You probably have not chosen the FNT file from which you wish to get the pattern, you did not save a pattern under that key, or you chose the wrong key (you meant to press another key).
-- The FNT file is empty (it has not patterns stored in it).
-- The FNT file has become locked.

There is a problem in saving the pattern!

-- You removed the diskette the shoppe was accessing the FNT file from, or the diskette is write-protected.
-- The FNT file has become locked.
-- The hard disk or diskette is full and cannot store another pattern. You must make room or use another disk(ette).

WHAT? You pressed a key that is not listed in the Function Keys Available box above ...

-- You pressed HELP and then a function key which is not available. Either press an available function key or the space bar to get out of HELP.

???-to-FNT Translation

TSK-to-FNT Translation

Typical errors are listed below. If none of the suggested solutions work, try using the TSK file from SIGHT. If the TSK file does not work PROPERLY from SIGHT, then contact the Shoppe architects for further assistance.

There is a problem in creating a new FNT file.

-- The current directory is on a diskette and no diskette is in the drive, or the diskette is write-protected.
-- The hard disk or diskette is full and cannot store another new file. You must make room or use another disk(ette).

There is a problem in opening that file.

-- The current directory is on a diskette and no diskette is in the drive.
-- The file is not a TSK font file.
-- The file locked.
-- The file is a TSK file, but it was not created for use as a font file, or it was created for use as a font file but it has different file attributes than normal.

There is a problem in reading from the TSK file.

-- The current directory is on a diskette and no diskette is in the drive.
-- The TSK file is locked.
-- The TSK file is corrupted.
-- The TSK file uses stange data placement, and the Shoppe can't handle it.

There is a problem in writing to the new FNT file.

-- The current directory is on a diskette and no diskette is in the drive, or the diskette is write-protected.
-- The remaining free space on the hard disk or diskette has been used up. You must make room or use another disk(ette).

... This is not an acceptable TSK font file.

-- The TSK file is not considered a font file due to the reason listed. It may actually be a font file, but it is not Shoppe compatible. Not all TSK font files have to use 16-by-16 size characters, for example, but they must be that size to be translated by the Shoppe.

TXT-to-FNT Translation

The above ASCII value is out of range (0-255).

-- You entered the wrong ASCII value for a grid pattern.
-- You forgot to enter an ASCII value for a grid pattern.
-- You deleted or inserted a line which caused the program to "miss" the line the ASCII value is on.

There is a problem in creating a new FNT file.

-- The current directory is on a diskette and no diskette is in the drive, or the diskette is write-protected.
-- The hard disk or diskette is full and canot store another new file. You must make room or use another disk(ette).

There is a problem in opening that file.

-- The current directory is on a diskette and no diskette is in the drive.
-- The file is locked.
-- The file is not a TXT font file for use by this program.

There is a problem in reading from the TXT file.

-- The current directory is on a diskette and no diskette is in the drive.
-- You entered data improperly at the indicated line.
-- The TXT file is corrupted, beginning at the indicated line.

There is a problem in writing to the new FNT file.

-- You are using a write-protected diskette or the data diskette is not in the drive.
-- You duplicated an ASCII value. the ASCII values may be in any order but duplications are not allowed.
-- The remaining free space on the hard disk or diskette has been used up. You must make room or use another diskette.

FNT-to-FNT Reconfigure

WARNING: If you specify the wrong reconfigure value, the newer version FNT file may end up begin empty! (Remember, though, that the earlier-version FNT file is not altered or deleted.)

There is a problem in creating a new FNT file.

-- The current directory is on a diskette and no diskette is in the drive, or the diskette is write-protected.
-- The hard disk or diskette is full and cannot store another new file. You must make room or use another disk(ette).

There is a problem in opening that file.

-- The current directory is on a diskette and no diskette is in the drive.
-- The FNT file may be locked.
-- The file is not a FNT file created by the Font Shoppe.
-- The FNT file's data is corrupted.

There is a problem in reading from the old FNT file.

-- The current directory is on a diskette and no diskette is in the drive.
-- The FNT file may be locked.
-- The file is not a FNT file created by the Font Shoppe.
-- The FNT file's data is corrupted.

There is a problem in writing to the new FNT file.

-- You are using a write-protected diskette or the data diskette is not in the drive.
-- The remaining free space on the hard disk or diskette has been used up. You must make room or use another diskette.

FNT-to-TSK Translation

WARNING: If a TSK file is created by the translation process even though an error message was displayed, DELETE THE TSK FILE AS SOON AS POSSIBLE. **Use of a TSK font file that was improperly created can possibly cause damage to other files on**

your disk, even if the bad TSK file appears to work correctly under SIGHT. Again, if any error message was displayed during translation, delete any residue TSK file.

WARNING: If, when you are using a TSK font file under SIGHT, **ANY UNRECOGNIZABLE CHARACTERS APPEAR, DO NOT USE THAT TSK FILE AGAIN.** If YOU created that TSK file with the Shoppe's translation process, then you should delete it and try translating the original FNT file again.

If you have followed the tutorial, you should know what should be in a TSK font file that YOU have created from scratch:

(a) The characters YOU created.

(b) Filler characters, if necessary, put in by the translator.

(c) Splats produced by GIDIS.

When you are using a TSK file that YOU did not create, it may be hard to tell whether the patterns or characters you are seeing were put in the TSK file that way intentionally. **IF YOU ARE UNSURE ABOUT ANY PATTERNS THAT APPEAR WHEN USING SOMEONE ELSE'S TSK FONT FILE, DO NOT USE THAT TSK FILE.**

One final warning:

NEVER, EVER TRY TO USE A TSK FILE AS A FONT IF YOU ARE NOT SURE IT IS A FONT FILE. Other files besides font files use the extension .TSK unfortunately.

One final note:

These warnings hold true whether you are using TSK font files in SIGHT or displaying them through the Shoppe's "display a TSK file's contents" option on the Main Counter.

There is a problem in creating a new TSK file.

-- The current directory is on a diskette and no diskette is in the drive, or the diskette is write-protected.
-- The hard disk or diskette is full and cannot store another new file. You must make room or use another disk(ette).
-- The translator cannot create a file with the required number of CONTIGUOUS blocks. You must make room for more contiguous blocks. (Refer to the Pro/300 hard disk manuals for help regarding contiguity.)

There is a problem in opening the FNT file.

-- The current directory is on a diskette and no diskette is in the drive.
-- The FNT file may be locked.
-- The file is not a FNT file created by the Font Shoppe.
-- The FNT file's data is corrupted.

There is a problem in reading from the FNT file.

-- The current directory is on a diskette and no diskette is in the drive.
-- The FNT file may be locked.
-- The file is not a FNT file created by the Font Shoppe.
-- The FNT file's data is corrupted.

There is a problem in writing to the new TSK file.

-- You are using a write-protected diskette or the data diskette is not in the drive.
-- The remaining free space on the hard disk or diskette has been used up. You must make room or use another disk(ette).
-- The translator cannot write to the file because there are not enough CONTIGUOUS blocks. You must make room for more contiguous blocks. (Refer to the Pro/300 hard disk manuals for help regarding contiguity.)

Print/Display FNT

Any open, read or closing errors:

-- The current directory is on a diskette and no diskette is in the drive.
-- The FNT file may be locked.
-- The file is not a FNT file created by the Font Shoppe.
-- The FNT file's data is corrupted.

Your printer shows no signs of life!

-- The printer is not turned on.
-- The ONLINE/OFF key on the printer is down.
-- The printer is not connected to the computer's printer port.

Display TSK

Any open, read, display, or closing errors:

-- The current directory is on a diskette and no diskette is in the drive.
-- The TSK file may be locked.
-- The file is not a TSK font file.

-- The file is a TSK file, but it was not created for use as a font file, or it was created for font use, but it has different file attributes than normal.

Showing the Install Name

If the install name cannot be read from the TSK file:

-- The current directory is on a diskette and no diskette is in the drive.
-- The TSK file may be locked.
-- The file is not a TSK font file.
-- The file is a TSK file, but it was not created for use as a font file, or it was created for font use, but it has different file attributes than normal.

SIGHTkick

SIGHTkick documentation and error messages are in the separate user's guide, "SIGHTkick, A Pro/Sight Font Loader."

Section VI.

FORMS AND CHARTS

Character Grid Function Keys. VI-2

Reference Grid Function Keys. VI-2

Playing Field Function Keys VI-3

How to Exit from or Stop a Section or an Option VI-3

ASCII Character Chart VI-4

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Character Grid Function Keys

ADDITIONAL OPTIONS .	Presents the menu for displaying/printing a FNT file	
Arrow Keys	Moves stamper around the grid in indicated direction	
BREAK	Turns the Update "echo" feature on and off	
CANCEL	Cancels SELECT option prompt	
DO	Saves grid pattern in the created/chosen FNT file	
EXIT	Presents option for exiting to Main Counter	
INSERT	Fills in the block outlined by the flashing stamper	
NEXT	Moves you to the Playing Field	
PF1	Reverses all of the blocks on the grid	*
PF2	Flips the grid pattern left/right	*
PF3	Flips the grid pattern up/down	*
PF4	Stores the grid pattern in temporary memory	
PREV	Moves you to the Reference Grid	
REMOVE	Unfills the block outlined by the flashing stamper	
SELECT	SELECT+arrow key . scroll whole grid in key direction	
	SELECT+CANCEL . . cancel SELECT+ option	
	SELECT+INSERT . . fill in ALL blocks on grid	**
	SELECT+PF2 . . . . flip left/right with overlay	**
	SELECT+PF3 . . . . flip up/down with overlay	**
	SELECT+PF4 . . . . place stored pattern on grid	**
	SELECT+REMOVE . . unfill ALL blocks on grid	**
SET-UP	Presents options for choosing FNT file, character key	

* -- options are pattern non-changing: Same key pressed again will return grid pattern to its original state.

** -- options are pattern changing: Same key pressed again will not return grid pattern to its original state. (SELECT+PF4 does not change pattern stored under PF4.)

Reference Grid Function Keys

ADDITIONAL OPTIONS .	Presents the menu for displaying/printing a FNT file	
CANCEL	Cancels SELECT option prompt	
EXIT	Presents option for exiting to Main Counter	
NEXT	Moves you to the Character Grid	
PF1	Reverses all of the blocks on the grid	*
PF2	Flips the grid pattern left/right	*
PF3	Flips the grid pattern up/down	*
PF4	Stores the grid pattern in temporary memory	
PREV	Moves you to the Playing Field	
SELECT	SELECT+CANCEL . . cancel SELECT+ option	
	SELECT+INSERT . . overlay pattern on Character Grid	
	SELECT+PF2 . . . . flip left/right with overlay	**
	SELECT+PF3 . . . . flip up/down with overlay	**
	SELECT+PF4 . . . . place stored pattern on grid	**
	SELECT+REMOVE . . delete pattern from FNT file	***
SET-UP	Presents options for choosing FNT file, character key	

* -- options are pattern non-changing: Same key pressed again will return grid pattern to original state. Pattern in FNT file is not changed.

** -- options are pattern changing: Same key pressed again will not return grid pattern to its original state. (SELECT+PF4 does not change pattern stored under PF4.) Pattern in FNT file is not changed.

*** -- SELECT+REMOVE will delete the pattern from the FNT file and remove it from the Reference Grid. Do a PF4 before you delete it if you want to work with that pattern after you SELECT+REMOVE.

Playing Field Function Keys

Note: Playing Field-specific function keys have no affect whatsoever on the Character and Reference Grid patterns and FNT files.

ADDITIONAL OPTIONS .	Presents the menu for displaying/printing a FNT file
Arrow Keys	Moves the pattern around the Playing Field
CANCEL	Cancels SELECT option prompt
EXIT	Presents option for exiting to Main Counter
NEXT	Moves you to the Reference Grid
PREV	Moves you to the Character Grid
SELECT	SELECT+CANCEL . . cancel SELECT+ option

The following function keys only affect the pattern you are currently working with on the Playing Field. Once you leave the Playing Field, you relinquish control over that pattern.

PF1	Changes pattern color
PF2	Italicizes the pattern. Repeated PF2 presses will cause the pattern to be slanted forward, to a limit; at the limit, repeated PF2 presses will cause the pattern to be slanted backwards, to a limit
PF3	Rotates the pattern about its upper-left hand corner
PF4	Resets the pattern to its original size and position

SELECT	SELECT+down arrow increases pattern height
	SELECT+left arrow decreases pattern width
	SELECT+PF2 . . . . reverses slant increment direction
	SELECT+PF4 . . . . clears Playing Field and resets the working pattern's attributes
	SELECT+right arrow increases pattern width
	SELECT+up arrow . decreases pattern height

The following function keys and/or sequences will effectively cause the Playing Field to be cleared:

a) ADDITIONAL OPTIONS from the Field or any Grid
b) exiting from the Drawing Board
c) pressing HELP twice in a row from the Field or any Grid
d) SELECT+PF4 on the Field
e) The SET-UP Menu's "choose an existing FNT file" option (from either Grid)

How to Exit from or Stop a Section or an Option

Menu/Counter	Press	To
Additional Options	EXIT	return to previous option
File Selection (FNT, TSK, TXT, etc.)	EXIT	return to previous option
FNT-to-TSK Translation	EXIT	return to the Main Counter
Font Display Choice	EXIT	return to previous option
Main Counter	EXIT	leave the Font Shoppe
Services (Disk, etc.)	EXIT	return to previous option
SIGHTkick	EXIT	return to the Main Counter
SIGHT Exit Options	EXIT twice	return to the Main Counter
SIGHT Start-Up	EXIT	return to the Main Counter
???-to-FNT Translation	EXIT	return to the Main Counter

Option	Press	To
Display FNT contents	EXIT	return to previous option
Display TSK contents	EXIT	return to previous option
Drawing Board	EXIT	get the EXIT OPTIONS menu
Additional Options	EXIT	return to the Drawing Board
Exit Options	DO	quit to the Main Counter
HELP	space bar	stop HELP, return to Drawing Board
SELECT	CANCEL	cancel SELECT+
Set-Up	EXIT	exit menu, return to Drawing Board
File Selection (FNT, TSK, TXT, etc.)	EXIT	return to previous option
Print FNT file contents	CANCEL	stop printing, then press ...
	EXIT	to return to previous option
SIGHT	EXIT	then press EXIT twice more
Save Picture in File	EXIT	return to SIGHT Exit Options menu
Translation (???-to-FNT, FNT-to-TSK)	Once the translation is under way, you cannot stop the option. You must wait for the transla- to finish.	

ASCII Character Chart

DBK = Drawing Board key (accessible from the Drawing Board)
ASC = ASCII value
CCS = Compose Character sequence. Example: To get the cent sign ¢ (ASC 162) press COMPOSE, then C, then vertical bar |.

DBK	ASC	CCS	DBK	ASC	CCS	DBK	ASC	CCS	DBK	ASC	CCS	DBK	ASC	CCS
	000		3	051		f	102			153		Ì	204	I`
	001		4	052		g	103			154		Í	205	I'
	002		5	053		h	104			155		Î	206	I^
	003		6	054		j	105			156		Ï	207	I"
	004		7	055		i	106			157			208	
	005		8	056		k	107			158		Ñ	209	N~
	006		9	057		l	108			159		Ò	210	O`
	007		:	058		m	109			160		Ó	211	O'
	008		;	059		n	110		¡	161	!!	Ô	212	O^
	009		<	060		o	111		¢	162	C|	Õ	213	O~
	010		=	061		p	112		£	163	L-	Ö	214	O"
	011		>	062		q	113			164		Œ	215	OE
	012		?	063		r	114		¥	165	Y-	Ø	216	O/
	013		@	064		s	115			166		Ù	217	U`
	014		A	065		t	116		§	167	SO	Ú	218	U'
	015		B	066		u	117		¤	168	OX	Û	219	U^
	016		C	067		v	118		©	169	CO	Ü	220	U"
	017		D	068		w	119		ª	170	A_	Ÿ	221	Y"
	018		E	069		x	120		«	171	<<		222	
	019		F	070		y	121			172		ß	223	ss
	020		G	071		z	122			173		à	224	a`
	021		H	072		{	123			174		á	225	a'
	022		I	073		|	124		175		â	226	a^
	023		J	074		}	125		º	176	^0	ã	227	a~
	024		K	075		~	126		±	177	+-	ä	228	a"
	025		L	076			127		²	178	^2	å	229	a*
	026		M	077			128		³	179	^3	æ	230	ae
	027		N	078			129			180		ç	231	c,
	028		O	079			130		µ	181	/U	è	232	e`
	029		P	080			131		¶	182	P!	é	233	e'
	030		Q	081			132		·	183	^.	ê	234	e^
	031		R	082			133			184		ë	235	e"
pace	032		S	083			134		¹	185	^1	ì	236	i`
!	033		T	084			135		º	186	O_	í	237	i'
"	034		U	085			136		»	187	>>	î	238	i^
#	035		V	086			137		¼	188	14	ï	239	i"
$	036		W	087			138		½	189	12		240	
%	037		X	088			139			190		ñ	241	n~
&	038		Y	089			140		¿	191	??	ò	242	o`
'	039		Z	090			141		À	192	A`	ó	243	o'
(	040		[	091			142		Á	193	A'	ô	244	o^
)	041		\	092			143		Â	194	A^	õ	245	o~
*	042		]	093			144		Ã	195	A~	ö	246	o"
+	043		^	094			145		Ä	196	A"	œ	247	oe
,	044			095			146		Å	197	A*	ø	248	o/
-	045		`	096			147		Æ	198	AE	ù	249	u`
.	046		a	097			148		Ç	199	C,	ú	250	u'
/	047		b	098			149		È	200	E`	û	251	u^
0	048		c	099			150		É	201	E'	ü	252	u"

1	049		d	100			151		Ê	202	E^		ÿ	253	y"
2	050		e	101			152		Ë	203	E"			254	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	255	---

List of TSK Install Names

Fonts created by: _____

Font Directory: _____

FNT File Name	TSK File Name	Install Name	Font Description

List of Fonts used in GIDIS Pictures

Pictures created by: _____

Directory: _____

GID File Name	Uses TSK files:	TSK Install Names:	Description